the female; that the modified wings of the male contribute to this support would therefore be a plausible theory. But for the theory to hold good it must be proved that the wings are available for such a purpose, that is, capable of being raised and opened. I have supposed them to be incapable of any motion. An examination of a specimen which I have had in my possession for several years threw no light upon the matter, all its limbs having become rigid from immersion in alcohol, but a specimen rendered transparent and properly prepared for the microscope revealed the fact that the superior pair of wings were articulated at the outer two-thirds of their base, the inner third being free.

The wings of *B. Californicus* are furnished with similar series of spines. *B. nivoriundus* I have never seen.

Henry L. Moody.

Synoptical Tables for Determining N. A. Insects.

Observations upon the habits and other peculiarities of insects often fail of record merely because the names of the insects are not known to the observer. Beginners in the study of systematic Entomology find it of great advantage to start with a named collection, and can rarely get such, at least without difficulty. Collectors are encouraged by finding that it is easy to name their specimens, and from collectors are led to become students. For these reasons and others, any device is desirable which will render these names discoverable, with the least possible preliminary study; the experience of naturalists has shown that artificial keys, or dichotomic synopses, are most adapted to supply the demand.

A series of synoptical tables for determining the names of North American insects will appear in PSYCHE, as occasion favors. The first of the series will be a table for determining the families of Orthoptera. This will be followed by a table for determining the genera and species of the family Forficulariae, found in the United States. Other families of Orthoptera or other orders of insects will afterwards be treated in a similar manner. When one or a few of the members of any group are of such character that the insertion of those members into

the table would necessitate the establishment of dichotomies upon obscure marks of difference, those members will not be included in the table, but descriptions of them, or lists of them with references to descriptions will be added in an appendix, so that the completeness of the synopsis may not be impaired, while at the same time the table will be rendered more definite in its divisions.

Each synopsis will include a list of the groups of which it treats, with references to the most important accessible works in which monographs or descriptions are given. In case any groups have already been tabulated elsewhere, so that a new tabulation seems not to be needed, merely a reference to the tables will be given. Much space will be saved by the avoidance of useless repetition, at the same time that these synopses will serve as a complete guide to the larger works for which no substitute can be made. *B. Pickman Mann.*

BIBLIOGRAPHICAL RECORD.

Authors and Societies are requested to forward their works to the Editor at the earliest date possible. We ask our readers to inform us of the publication especially of those works which are not generally consulted by entomologists. *B. Pickman Mann.*

(*Continued from page* 160.)

Nos. 447 to 534 are from the **Can. Entom.**, vol. vii (cont.).

* 447. { G. M. Dodge. Catocala Nebraskæ, Dodge. p. 2.
{ A. R. Grote. Note on Catocala Nebraskæ. p. 2–3.

Description; affinities. Note on *Nemophila* spp. from California.

* 448. Geo. Norman. Captures of Noctuidæ at St. Catharines, Ont. p. 3–6; p. 21–24.

List of 175 species collected, with dates, notes of abundance, and method of capture.

* 449. V. T. Chambers. Tineina from Texas. [Continued from vol. vi; see Rec. No. 441.] pp. 7–12, 30–35, 51–56, 73–75, 92–95, 105–108.

Remarks on three additional not new species; describes[1] *Hyponomeuta 5-punct, H. apicipunct, Gracilaria Belfrag* [*G. belfrageella*, p. 92], *G.* (*Corisceum*) *quinquestrig*, Naera, *N. fuscocristat, Butalis brevistrig* ["*buristriga*"], *B. dorsipallid, B. immaculat, B. planipen* ["*plausipenella*"], *B. albapen*, Glauce, *G. pectenalae, Laverna oenotherae, L. unicristat, L. rufocristat, L.*

[1] Every specific name ends in *ella*, omitted in the Record to save space.