sharp upper border. Dorsal space light leaf green, an irregular, but distinct geminate, shaded greenish white dorsal band, broadening out and filling in all the dorsal space on joints 2 to 4, still obscurely darker centered. All the space below the subdorsal line likewise completely filled in with the same greenish white, with the paler secondary dots. Spiracles white with a median brick red band, except the one on joint 5 which is white with a black spot at its posterior side. The side color of the body is cut by darker green oblique shades which run from the posterior edge of each segment on the substigmatic line upward and forward (in the reverse direction from what is usual in Sphingidac) each confined to a single segment, on joints 5 to 11. A substigmatic line is distinct from the anal feet forward to joint 11, white and yellow like the subdorsal line and also shaded with pink. Forward of joint 11 it becomes faint and is scarcely distinguishable in front of joint 8. Horn pointed, green, with black spinules, the apex pale. Head dark green with narrow, obscure, vertical, pale bands; antennae pinkish; width about 2.5 mm.; length of horn 4 mm.; of the larva 28 mm. The food plant of this tiny Sphinx is the ‘wax berry,” Cleococca racemosa, determined for me by Mr. F. Kinzel. The imago appeared in six weeks. Larvae from Lake Worth, Florida.

THE NEW CATALOGUE OF BEES.


All students of bees must gratefully welcome this admirable catalogue, which gives not only the names of the species, but the localities and all the more important references. It is practically complete up to the end of 1893, but various species described in 1894 from America are omitted, though one would suppose that there might have been time to include them before printing. Of course, as is inevitable in such a work, the details suggest much criticism and comment. Very strangely, Wm. Kirby is in many places called W. F. Kirby, although the latter name is rightly the property of a much more recent entomologist, still happily with us. Andrena is modified to Anthrena, and Heriades to Eriades, but it is questionable whether such changes can be accepted. Anthophora becomes Podalirius, apparently on good grounds of priority. Our Colletes punctatus Rob. (nom. preocc.) becomes C. robertsoni D. T. Our Haliictus cephalicus Rob. (nom. preocc.) becomes H. cephalotes D. T., although there was already a nomen nudum H. cephalotes Schill., 1839. H. distinctus Prov. (preocc.) becomes distinctus D. T. H. gracilis Rob. (preocc.) is altered to gracillimus, but Mr. Robertson had already changed the name to foxii. H. palmatus Rob. is also altered to paludicola, in ignorance of Mr. Robertson’s substitution of nymphaceaeum last year. H. constrictus Prov. (preocc.) becomes provancheri D. T. It may here be observed that Mr. Robertson substituted H. macoupinensis for his H. quadricinculatus, “nec Schenk”; but it appears that Schenk’s species is a synonym of H. interius. Our H. fulves Sm. (preocc.) becomes rhodactylus D. T.

Our Andrena fimbriata Sm. (preocc.) becomes americana D. T. A. simulata Prov. is altered to canadensis. A. cyphata Sm. becomes cypholata D. T. A. laticeps Prov. becomes provancheri. A. serotina Rob. becomes robertsonii. A. salicis Rob. was preoccupied by salicis Verhoeff; but the latter name is a synonym of albicans. A. scutellaris Rob. becomes scutellata D. T. Nomia punctata Fox (preocc.) is altered to N. foxii D. T.

Eunomia is not held to be distinct from Nomia. Cilissa is made a synonym of Mellitta. Euera is made to include, as subgenera, Diadasia, Emphor, Melissodes,
Synhalonia, Tetralonia, Xenoglossa, etc., but it seems impossible to accept such wholesale lumping.

Melissodes tristis Ckll. is much later than Eucera tristis Mor., but I do not care to rename it until convinced that it is desirable to merge Melissodes in Eucera. Eucera arctos n. n. is founded on ursina Cr., not of Haliday, but the name is unnecessary, since ursina is a synonym of enava. M. brevior Cr. becomes E. cressonii. M. californica Sm. becomes E. smithii.

Podalirius (Anthophora) is made to include as subgenera, Clisodon, Entechina, Habropoda, etc. Habropoda micata is changed to P. cressonii. Anth. carbonaria Cr. becomes P. infernalis. Our Nomada rubra Prov. becomes N. erythraea D. T. N. integra Rob. becomes N. integerrima D. T. N. punctata Cr. becomes N. provancheri D. T. Chelostoma is treated as a subgenus of Eriades. Osmia quadridentata Cr. becomes cressonii D. T., but this change is unnecessary, since it is a synonym of O. conjuncta Cr. O. parva Prov. becomes O. parvula D. T. Mecachile carbovaria Cr. becomes M. cressonii. Mr. Fox's three Jamaican species of Mecachile are wrongly said to be from Indiana. M. simplex Prov. becomes M. simplicissima D. T. Anthidium vernalum Cr. becomes cressonii. Coelioxys brevis Cr. becomes C. cressonii, but the author overlooks the fact that Cresson himself long ago changed the name to altis. Philemerus is changed to Ammobates, which has priority of place on the same page of Latreille. The name Ammobates has been very frequently used in Europe for many years. Although the papers of Robertson and Coville are duly quoted under Psithyrus (or Apathus) elatus, the author did not examine them sufficiently to learn that the insect in question was a Bombus. Trigona and Tetragona are given as subgenera of Melipona. Trigona nigra Cr. becomes M. cressonii D. T. Apis mellifica L., 1761, is to be called A. mellifera L., 1758.

It must be confessed that it is not entirely creditable to our knowledge of the literature of our subject, that the author of this new catalogue has been able to supersede so many names of American species on grounds of preoccupation. It is fair to state, however, that in some instances we were aware of the prior names, and changes, would have been proposed on this side of the water sooner or later. In a few cases the changes had actually been made, and our author was not aware of it.

T. D. A. Cockerell.

New Mexico Agric. Exper. Station, March 3, 1896.

CHRYSOBOTHRIS FEMORATA AND CLERUS 4-GUTTATUS.

Wood piles are always attractive collecting spots. Chrysobotlrus femorata Fab. is a frequent visitor, and runs about very briskly, especially on hickory and oak logs. Early in June, 1894, a specimen of femorata was seen and heard to produce a very distinct noise by striking rapidly with the end of its abdomen on the bark of an oak log. Tapping with the finger nail seemed to attract other Chrysobotlrus on the same log, but it may have been only a coincidence. Unfortunately the tapping specimen could not be caught to determine its sex, but it was probably a male, and the tapping a call or challenge. Last summer no opportunity occurred of observing Chrysobotlrus, but so common a species offers a good chance for all interested to make further observations on this interesting tapping habit.

On the 16th of June, 1895, on a fresh spruce log was noticed a specimen of Clerus 4-guttatus Oliv. It had in its grasp a good-sized Scolytid, either Xyleborus or Tomicus. It held the victim with its front and middle legs, and kept turning it round and round, biting at it all the time, and raising itself on its hind legs. Finally it seized the Scolytid firmly beneath where