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Notes on Some Bees of the Genus Andrena from Hartford, Connecticut

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Male.—Slightly shorter than female; abdomen with parallel sides and rounded at tip; antennæ with a dark blotch at base of club.

Described from two males, two females, reared from eggs of *Cicada septendecim*, collected by T. Pergande, in Virginia, just across the Potomac River from the City of Washington, in July, 1895. All four specimens mounted on a single slide. Type No. 3850, U. S. Nat. Mus.

NOTES ON SOME BEES OF THE GENUS ANDRENA FROM HARTFORD, CONNECTICUT.

BY T. D. A. COCKERELL, N. M. AGR. EXP. STA.

The following notes are based on specimens collected by Mr. S. N. Dunning, all at Hartford :—

(1) *Andrena Dunningi*, n. sp.—♀. Length 12 mm.; black, with ochraceous pubescence. Facial quadrangle broader than long; lateral facial depressions covered with appressed pubescence; clypeus shining, with large close punctures, median line impunctate; front below ocelli irregularly striate, a keel descending from middle ocellus; vertex minutely roughened, with ill-formed punctures; antennæ reaching to tegulæ, wholly dark, first joint of flagellum a little longer than the two following together; mandibles dark, rufescent at extreme tip; *process of labrum broad and low, but very large, gently curved;* thorax, even the metathorax at base, quite densely covered with long fulvo-ochraceous hair, that on pleura like that above; *mesothorax minutely tessellate or lineolate, with strong deep punctures;* enclosure of metathorax granular, ill-defined; tegulæ shining, dark brown; wings strongly flavescent, not darkened at apex, stigma ferruginous, nervures dark brown; *second submarginal cell very broad, nearly as large as the third,* receiving the first recurrent only just beyond the middle; legs black, the small joints of the tarsi dark reddish-brown; *pubescence of femora, and of hind tibiæ, ochraceous; that of the other tibiæ, and all the tarsi, very dark chocolate brown,* shining paler in certain lights; abdomen shiny, minutely tessellate, *with quite numerous but very small and weak punctures; surface of abdomen bare, without bands; apex densely clothed with fulvous hair;* venter with long fulvous hairs.

Hab.—Hartford, Connecticut, May 26, 1895 (S. N. Dunning). Superficially this species looks much like *A. vicina*, but the pubescence of the apex of the abdomen at once separates it. It is very much like *A. pruni*, but that has the punctures of the abdomen much stronger, the basal joint of the hind tarsi is longer and narrower, and the colour of the tarsal pubescence is entirely different.

(2) *A. Forbesii*, Rob.—♀. April 19. Beside the colour of the pubescence, *Forbesii* is distinguished from *rugosa* by the smaller and more numerous ridges on the base of the metathorax; about 20 in *Forbesii*, about 12 or 14 in *rugosa*. The abdominal hair-bands of *Forbesii* may be practically obsolete.

(3) *A. Cressonii*. Rob.—♂, April 30; ♀, April 19. The ♂ is not quite typical in the face-markings.

(4) *A. bipunctata*, Cress.—Many males, April 19 to May 18.

(5) *A. vicina*, Sm.—April 21 to June 18. Very many. None are var. *errans* (*A. errans*, Sm.). At Olympia, Washington State, Mr. T. Kincaid takes the typical form and var. *errans* together, the variety being the most numerous.

(6) *A. fimbriata*, Sm.—♀, Sept. 9 and 15. ♂, Sept. 9. The male is smaller and more slender than the ♀; face wholly dark, with long yellow hair; flagellum faintly ferruginous beneath; process of labrum bifid; apex of abdomen with yellowish-white hair; pubescence of legs pale.

BOOK NOTICE.

SOME CONSIDERATIONS ON THE NATURE AND ORIGIN OF SPECIES.—By J. W. Tutt, F. E. S.

This is the title of the presidential address delivered before the City of London (England) Entomological and Natural History Society, December, 1897, published in a pamphlet of 20 pages. Mr. Tutt interestingly reviews the recent theories as to the causes of species formation, touching on the presence of variation in organic beings, action of natural selection, origin of local races by adaptation to differing environment, etc., and comes to the conclusion that all generic and specific characters are due to the past or present action of natural selection. Comparatively fresh points are made in that specialization of genital organs does not necessarily accompany other specialization, and that isolation may be brought about by difference in time of emergence, difference in habit or in the hours of mating, as well as by geographical conditions.

Mr. Tutt does not believe that climate, food, sexual selection (in insects at least), isolation or laws of growth can produce specific characters; all such must be utilitarian. This is the position so ably defended by Wallace, but nevertheless certainly untenable.

The reviewer would refer Mr. Tutt to the case of Datana, where all the specific characters seem so evidently due to the action of isolation alone, as most recently lucidly explained by Romanes. In this case the isolation is due principally to different food plants.

HARRISON G. DYAR.

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