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Some European Bees

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Some European Bees.

By PROFESSOR T. D. A. COCKERELL, F.Z.S.

During the past summer, my wife and I collected bees in several European localities, and, although the season was phenomenally poor, we were pleased to see in life many interesting species which we had only known as cabinet specimens. Our one really good day was at Troyes, in France, on August 8th. It was extremely hot, and we found a railway-bank covered with flowers, over which flitted *Pontia daplidice*, *Colias hyale*, *Pieris brassicae*, *Vanessa urticae*, *V. io*, and other butterflies. The following bees were obtained:—*Panurgus dentipes*, 2 ♂, one with head extremely large, constituting a form (var. *megacephalus*, n. var.) parallel with the variety *macrocephalus* of *P. calcaratus*; *Nomada lineola*, Panz., 1 ♀; *Ceratina cyanea*, Kirby, 1 ♀; *Stelis aterrima*, Panz., 1 ♀; *Osmia fulviventris*, Panz., 1 ♀; *Halictus scabiosae*, Rossi, 1 ♀; also another *Halictus* and a *Colletes* not yet determined; *Anthidium manicatum* var. *nigrithorax*, D.T., 2 ♂s; *Anthidium oblongatum*, Latr., 1 ♂, eyes in life, olive-green, with the anterior part reddish-black.

Anthidium, as commonly understood in Europe, includes at least two genera—

(1) *Anthidium*, type, *A. manicatum*, with no pulvillus, using cottony tomentum in making its nest, and (2) *Dianthidium*, type, the American *D. sayi*, having a pulvillus on the feet, and using resin in the construction of its nest.

Fabre has termed these two groups the "Cotonniers" and the "Résiniers." The subgenus *Proanthidium*, Friese, consists of a mixture of *Anthidium* and *Dianthidium*, but I propose to take as the type (none being designated by Friese) the first species, *A. oblongatum*, which, though approaching *Dianthidium* in some respects (especially the venation), is a "Cottonier," and has no pulvillus. The subgenus *Pseudoanthidium* (5 species) I have not been able to examine; but Friese's *Paraanthidium*, according to a specimen of *A. interruptum*, Fabr., in the British Museum, goes with *Dianthidium*, and having two years' priority, should perhaps supplant it. It represents, however, a quite distinct group, with the clypeus much broader in proportion to its length, and may probably be regarded as a distinct genus. The Palæarctic species usually referred to *Anthidium*, so far as known to me, may be classified as follows: —

ANTHIDIUM SERIES.

ANTHIDIUM, Fabr., 1804 (type *manicatum*, L.).

(1) *manicatum* group.
(2) *punctatum* group.
(3) *montanum* group.
(4) *variegatum* group.
(5) *cingulatum* group.
(6) *lituratum* group.

PROANTHIDIUM, Friese, 1898 (type *oblongatum*, Latr.).

P. oblongatum, Latr., *P. undulatum*, Dours., *P. morawitzii*, D.T.

DIANTHIDIUM SERIES.

DIANTHIDIUM, Ckll., 1900 (type *sayi*, Ckll.).

(1) *bellicosum* group.
(2) *ferrugineum* group.
(3) *sticticum* group.
(4) *septemdentatum* group.
(5) *strigatum* group = subg. *Anthidiellum*, Ckll., 1904.

PARAANTHIDIUM, Friese, 1898 (type *interruptum*, Fabr.).

DECEMBER 15TH, 1909.

Dianthidium extends even to Australia; I am greatly indebted to Mr. Rowland E. Turner for a specimen of *Dianthidium turneri* (*Anthidium turneri*, Friese, 1909), taken in November, at Mackay, Queensland.

Other captures of the past summer were—

(1) Wangen, Baden, at the famous Œningen fossil quarries, *Bombus variabilis* var. *notomelas*, Kriechb., August 5th.

(2) Gersau, Switzerland, July 30th, *Heriades truncorum*, L., *Bombus lapidarius*, L., *B. terrestris*, L., *B. hypnorum*, L., *B. agrorum*, Fabr. In hard cells on the face of the rock we obtained *Osmia adunca*, Latr., dead.

(3) Rigi Kulm, Switzerland (summit of the Rigi), August 1st, *Psithyrus rupestris*, Fabr., *Bombus lapidarius*, L., *B. terrestris* var. *autumnalis*, Fabr. The last is not quite true to type, having the first (thoracic) band distinctly tinged with yellowish. The top of the Rigi was rather disappointing, being much grazed by cattle.

(4) Kew Gardens, Surrey, July 20th, at flowers of *Spiraea japonica glabrata*, *Bombus lapidarius*, L., *B. terrestris*, L., *Prosopis* sp. (*annulata* ?), and *Andrena* sp.

Various small species, *Halictus* and *Prosopis*, and a single male *Andrena*, have not yet been determined. Not a single *Megachile* was seen during the summer. At Richmond, Surrey, I took a specimen of *Halictus smeathmanellus*, which resembles a French specimen in the British Museum, but is not like the British specimens there preserved, these being not nearly so bronzy. Saunders admits only one British species which can possibly include these specimens, but if I received them from some remote country, I should think I had two different things.

At South Kensington, in the Natural History Museum, I found a *Bombus terrestris* var. *lucorum*, L.