7-1-1903

Notes on the Bee: Genus Apis

T. D. A. Cockerell

REPRINTED FROM

THE ENTOMOLOGIST.

Subscription for one year, including all double numbers and postage, Six Shillings, payable in advance to WEST, NEWMAN & CO., *54, Hatton Garden, London. Postal Orders should not be crossed.*

THE ENTOMOLOGIST

VOL. XXXVI.] JULY. 1903. [No. 482.

NOTES ON THE BEE: GENUS *APIS*.

BY T. D. A. COCKERELL.

AN examination of the mouth-parts of three species of *Apis* shows great uniformity; the maxillary palpi are always two-jointed, notwithstanding the statement of all authors examined to the contrary. The species studied can be separated thus:—

1. Second joint of labial palpus about 420 μ long . *indica*, Fabr. ♀.
2. Second joint of labial palpus about 600 μ long in ♀ . . . . . 3.
3. "Spoon" at end of tongue long and narrow, about 150 μ long, 80 broad . . . . . *dorsata*, Fabr.
   "Spoon" at end of tongue circular, about 100 μ long, 110 broad . . . . . *ligustica*, Spin.

The difference in the "spoon" between the last two was observed and pointed out to me by Miss Irma Bell, one of my students. The second joint of labial palpus in *dorsata* may measure as much as 650 μ, but this "giant" bee has the mouth practically of the same size as the Ligurian bee. The second joint of labial palpus in the male *ligustica* is comparatively short, only about 450 μ. I am indebted to Mr. E. E. Green for material of *indica* and *dorsata*; *ligustica* is the form of the honey-bee common in New Mexico.

Apis is usually placed at the head of the bees, and regarded as the extreme limit of bee-development. It is of course greatly specialized in its mouth-parts, its habits, &c.; yet it retains some very primitive characters. The venation of the wings is very wasp-like. The peculiar submarginal cells suggest those of *Notogonia*, *Tachytes*, or *Laphyragogus*. The long marginal cell and the form of the eyes in the male recall the primitive bee genus *Protoxæa*. The shape of the marginal cell, and the venation approaching the apical margin of the wing, suggest the wasp *Monedula*; and it is to be remarked that some genera of

Bembicini have only three-jointed maxillary palpi. I think it is certain that *Apis* has no particular relationship with the ordinary long-tongued bees, such as *Anthophora*, &c.; so far as blood-relationship goes, it must be nearer to some of the primitive bees.

P.S.—When I say that certain characters of *Apis* are primitive, I mean that they are wasp-characters not ordinarily found among bees. Regarding the matter from a broader standpoint, the characters are not primitive; and no doubt a square wing-cell is more primitive than a long or triangular one. The point is that the bees are derived from the wasps, and it is not probable that such wasp-characters as *Apis* shows would reappear after being absent in a long series of bee ancestors.

East Las Vegas, New Mexico, U.S.A.: May 14, 1903.

DESCRIPTION OF A NEW SPECIES OF *AMMOPLANUS* (HYMENOPTERA) FROM SOUTH AFRICA.

By P. Cameron.

Ammoplanus mandibularis, sp. nov.

Black, the mandibles and fore knees pale testaceous, the flagellum of the antennæ brownish beneath; the wings hyaline, the large stigma black, pale at the base. ♀. Length 2 mm.

Hab. Pearston, South Africa; Dr. Robert Broom, C.M.Z.S.

Smooth, shining, the median segment aciculated; the base of the antennæ brownish; the scape not quite reaching to the middle of the head and not to the top of the eyes; the pedicle twice longer than broad, the following joint is about equal in length to it. Propleuræ with a wide furrow in the centre, which becomes narrowed towards the apex; the metapleuræ obscurely striated; the striæ are roundly curved; there is a round shallow fovea on the mesopleuræ. Metanotum opaque, strongly aciculated, obscurely furrowed in the middle. The lower abscissa of the radius is straight and oblique, not roundly curved, as in *A. perrisii*. The metatarsus pale. The eyes on the inner side below distinctly curve inwardly.

The genus *Ammoplanus* is of small extent, and hitherto has only been recorded from the Palæarctic and Nearctic Zoological Regions.

On the 1st of every Month, price SIXPENCE.

THE ENTOMOLOGIST

An Illustrated Journal of General Entomology

EDITED BY RICHARD SOUTH, F.E.S.

WITH THE ASSISTANCE OF

ROBERT ADKIN, F.E.S.
W. LUCAS DISTANT, F.E.S., &c.
EDWARD A. FITCH, F.L.S., F.E.S.
F. W. FROHAWK, F.E.S.
MARTIN JACOBY, F.E.S.
W. F. KIRBY, F.L.S., F.E.S.
G. W. KIRKALDY, F.E.S.
W. J. LUCAS, B.A., F.E.S.
DR. D. SHARP, F.R.S., F.E.S., &c.
G. H. VERRALL, F.E.S.

Occasional Lithographed Plates by the best Entomological Artists, and frequent woodcu

London: SIMPKIN, MARSHALL, HAMILTON, KENT & CO., Limited.