NOTES.

PAPILIO PARMATUS (G. R. GRAY) AT MACKAY .--- I have to record the very interesting fact of the occurence of this rare species of Papilio from Mackay, kindly communicated to me by Mr. Rowland E. Turner, of The Ridges. Papilio parmatus has only hitherto been known as a strictly Cape York species, and even from there in but few isolated examples ; the solitary specimen in my collection being, I believe, hitherto the only representative in Australian collections. During my experience, extending over a period of about twenty years, I have never heard of its being taken south of the last named locality, and I have been in receipt pretty regularly during the whole of this time of collections from almost every settlement upon our north-east coast, and have collected personally in the best Lepidopteraproducing localities on our northern seaboard. This circumstance affords another instance of the almost impossible attempt to arbitrarily define the geographical area of the locale of species, even when supported by long and careful observation .--- W. H. MISKIN, Toowong, 13th Dec., 1886.

BRAULA CÆCA, Nitzsch-A BEE-PARASITE.-Whilst requesting information as to the best method of mounting for the microscope a particular bee-parasite, our well-known apiarist, Mr. R. J. Cribb, introduced to my notice the interesting objects of this class which had suggested his inquiry. Accompanying a specimen of what appeared to be a hybrid Italian worker-bee were three tiny insects, stated to have been found parasitic upon it. These, on examination, proved to be nothing other than the remarkable Braula cæca of Nitzsch. Braula is indeed a noteworthy animal, one of the least developed of the great family of the flies proper, or Diptera, and a connecting link as it were between insects and arachnids (scorpions, spiders, mites, &c.) Its life history and structure, however, show that degraded though it is, and though it is one in which no wings proper occur, it is nevertheless a true dipterous insect. It is also quite blind, and hence the designation cæca. Scarcely exceeding half a line in length, it is of a dark brown colour, and is clothed with stiff hairs. Its large broad head is remarkable not only on account of the absence of eyes, but for the possession of curious three-jointed antennæ contained in deep pits. Considered with reference to those of other insects, its mouth organs too have a somewhat anomalous form. Its midbody is short, ring-shaped, and almost merged into a ovoid fivejointed hind body. The six legs are all stout, with the usual



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