ONISCIGASTER WAKEFIELDI,

A NEW GENUS AND SPECIES

OF

EPHEMERIDÆ FROM NEW ZEALAND.

BY

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If, as appears possible, the endemic fauna of New Zealand is not rich in species, and has a natural tendency to become extinct, and be replaced

by foreign elements that there find conditions more suited to them than even their places of origin, it at least furnishes us from time to time with most remarkable forms in all classes. Not one of the less conspicuous of these is the extraordinary 'May-fly' described below, which I recently received from my friend C. M. Wakefield, Esq., of Christchurch, Canterbury Settlement, N.Z.*

ONISCIGASTER.

(♀ *Imago*). *Corpus elongatum, valde robustum. Alæ quatuor; posticæ sat latæ, ovales; omnes venulis transversalibus ubique (anticæ apicem versus minus dense) regulariter reticulatæ. Pedes antici reliquis vix longiores; tarsi omnes 5-articulati, sub-æqualiter biunguiculati, posticorum articulô 4° brevi sed valde distincto. Abdomen valde elongatum et robustum; segmentis 7°—9° utrinque conspicue corneo-alatis, acutè productis*†*; ultimo parvo, elongato, obtuso-conicale: ovivalvula nulla: caudæ tres elongatæ (mutilatæ, sed medianâ cæteris graciliore, et forte breviore).*

The extraordinary abdomen of this genus, if considered without regard to the rest of the body, might almost pardonably be mistaken for that of some Myriapod (without the legs) or Crustacean. In the absence of the ♂, the affinities must remain somewhat uncertain‡; but, on the whole, I think that *Ephemera* (as restricted) and *Pentagenia* may be considered as the nearest allies, both of these differing (putting the abdominal characters for the moment out of consideration) in having only 4-jointed posterior tarsi. *Siphlurus* agrees in possessing 5-jointed posterior tarsi, but differs in its rudimentary (or, it may be said, absent) middle tail. Mr. Eaton has pointed out in his Monograph of the *Ephemeridæ*, that a tendency to lateral production of the terminal segments of the abdomen is shown in several genera, but the amount of expansion hitherto known is infinitesimal as compared with that present in *Oniscigaster*. For actual affinity in this respect we must look to the aquatic stages of some forms; and if the assertion by MM. Joly, that the so-called genus of branchiopod Crustacea named *Prosopistoma* by Latreille, is, as appears most probable, in reality only the aquatic condition of an Ephemerid, we have in the "*Binocle à queue en plumet*" the nearest ally, so far as regards abdominal structure, to *Oniscigaster*.

* Almost immediately before receiving the insect to the consideration of which this paper is devoted, I had published in the "Annals and Magazine of Natural History" for July, 1873 (pp. 30–42), a list of all the then known species of Neuropterous Insects from New Zealand.—R. McL.

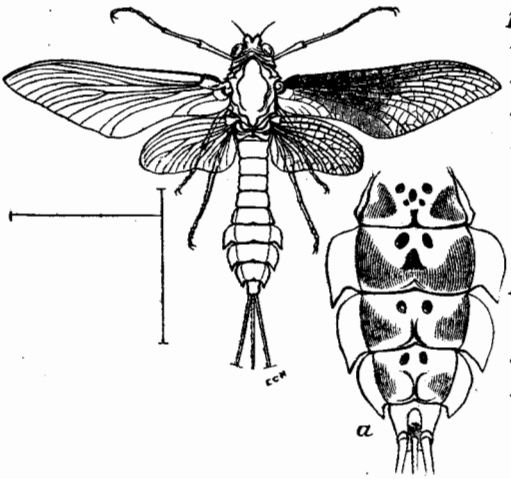
† In one of the examples mentioned at p. 110, there is also an irregular and very acute projection on the right-hand side of the 6th segment.—R. McL.

‡ From analogy, it may be considered almost certain that the ♂ will prove to have long anterior legs, a still shorter middle tail, a less robust abdomen, with probably still greater development of the lateral processes, and the usual anal forceps. The eyes are probably simple, as in *Ephemera*, &c.—R. McL.

And this abdominal structure is repeated to a certain extent in the aquatic condition of *Bætisca obesa*, which presents many of the same characteristics as *Prosopistoma*.

Oniscigaster Wakefieldi.

O. suprà nigro-fusca; thorace nitido; abdomine indistincte pallido-vario, infrà flavido, nigro-punctato, segmentis singulatim maculâ magnâ nigrâ utrinque signatis: caudæ flavo-albidæ. Pedes flavi, late nigro-annulati. Alæ vitreæ, anticarum dimidio basali et posticis omnino læte fuliginosis: venæ venulæque nigræ; his ad anticarum marginem costalem valde incrassatis, nigro-marginatis et suffusis: humeris nigris vel nigro-fuscis.



a. Terminal segments of abdomen viewed from beneath.

Long. corp. (sine caudis) 10‴ (= 21 *mill.*); *exp. alar.* 19‴ (= 40 *mill.*).

I have examined two female imagos.

Lewisham: *September*, 1873.