

Several individuals were taken from one column and placed in the line of march of the ants from the other nest. They showed the usual evidences of strangeness and failed to fraternize; but, on the other hand, no one was assaulted by the passers by, a toleration worthy of note, as showing some degree of community among the various nests of the one species.

The time which the author could give to these observations was limited to several hours of a summer afternoon, which he spent as a tourist in this interesting mountain-region; but they present some conclusions which appear to be reasonably decisive, and which at least may serve to stimulate further observations in the same line extending over greater periods and including a greater number of cases.—*Proc. Acad. Nat. Sci. Philad.* November 1, 1887, p. 335.

On some new Species of Cepenina. By MM. A. GIARD and
J. BONNIER.

The Cepenina, or Epicarides parasitic upon the Brachyurous Decapods, until within the last few years were known only by a very small number of species which were very insufficiently described. Since the publication of our Monograph on *Cepen elegans*, with a revision of the group, we have received abundant materials for study, which enable us to extend considerably the notions arrived at with regard to these curious Isopoda.

Prof. Milne-Edwards has furnished us with a Cepenian parasitic upon the *Nautilograpsus minutus*, Fabr., of the Sargasso Sea. Prof. J. R. Henderson, of Madras, has sent us a *Portunicepen* parasitic upon the *Thalamita callianassa*, Herbst, of the Indian seas. Lastly, M. A. Agassiz, having been kind enough to confide to us for description the superb series of Epicarides belonging to the museum of Harvard College (Cambridge, Mass.), we have found in this collection a very interesting type, collected at the Society Islands upon *Trapezia dentifrons*, Latr.

The Cepen of the *Nautilograpsus*, which we shall call *Grapsicepen Edwardsi*, appears to be a comparatively abundant species. Of 326 *Nautilograpsi* collected on the 4th August, 1883 (voyage of the 'Talisman'), 32 bore parasites either on the right or on the left of the carapace, 2 were infested at the same time both to the right and left, and the two sexes are equally attacked by this *Cepen*.

This parasite produces no apparent deformation of the carapace of the *Nautilograpsus*. Nevertheless it is easy to recognize its presence in consequence of the transparency of the integuments of the crab, which enables us vaguely to distinguish the outlines of the Bopyrian. The reddish colour of the adult female of *Grapsicepen Edwardsi* persists very well in alcohol and greatly facilitates the search for it. The influence exerted upon the internal organs of the host seems to be very slight. A good number of infested females of the *Nautilograpsus* bear ova under the tail in as considerable quantities as the healthy females.

As in all the *Grapsicepones*, the pleal plates of the female of *G. Edwardsi* are finely and regularly fringed. The maxillipede has exactly the same form as in *G. Messoris*, Kossm., but it is distinguished specifically by the absence of all denticulation. There are two dorsal bosses, upon the middle of the sixth and seventh thoracic segments, that on the seventh segment being the larger.

Hitherto the males of *Grapsicepon* were unknown. That of *G. Edwardsi* is very remarkable. By its much smaller amount of degradation than in the other *Ceponians* it approaches the *Leidyæ*. The pigmentation is very strong; the segments of the pleon become narrower very rapidly from in front backwards; each of them bears *biarticulate* pleal feet. The lateral appendages of the pygidium, although not so long as those of the males of *Leidyæ*, are very prominent and inflected towards the ventral surface. The median ventral bosses extend upon the first three pleal segments and are sometimes much pigmented.

We have only been able imperfectly to study the *Cepon* parasitic upon *Trapezia dentifrons*. Having at our disposal only a unique specimen collected by J. M. Barnard (*fide* A. Garrett), we have been obliged to abstain from any dissection; but the mere external examination of this parasite, which we name *Grapsicepon amicorum*, possesses much interest. In fact there still exists a certain amount of hesitation as to the systematic position of the *Trapeziæ*. Prof. H. Milne-Edwards made these Crustacea, under the name of "*Cancériens quadrilatères*," into a group intermediate between the *Catometopa* and the *Cyclometopa*, with which he connected them through the *Eriphice*. E. Nauck, relying upon the characters furnished by the stomachal armature, regards the *Trapeziæ* as quite distinct from the *Cyclometopa*, and inclines to approximate them to the division *Heterodonta*, in which he places the *Gelasimidæ* and *Pinnotheridæ*.

The study of *Grapsicepon amicorum* seems rather to furnish arguments in favour of Milne-Edwards's opinion. The female is very large relatively to the size of the host. It is of a brownish colour and its dorsal integument is shining, like that of *Trapezia*. There are no dorsal bosses, which approximates this species to *Cepon typus*, from which it differs completely, however, by the form of the coxal pads. The plates and appendages of the pleon are like those of *Grapsicepon*; the male is much pigmented; the ventral bosses exist only upon the first segment of the pleon; they are voluminous and covered with denticulate scales. The pleopoda are *biarticulate*, with the terminal joint rudimentary. The lateral lobes of the pygidium are much shorter than in *Grapsicepon Edwardsi*. In fact the characters of this species approximate it rather to the *Ceponians* parasitic upon the *Grapsi* than to the *Leidyæ*, parasites of the *Gelasimi*; therefore, to avoid the establishment of too many generic groups, we place it provisionally in the genus *Grapsicepon*.

We give the name of *Portunicepon Hendersoni* to the *Ceponian* parasite of *Thalamita callianassa*, Herbst (*Goniosoma*, A. Milne-Edwards). This species appears to be pretty frequent at Madras,

whence Prof. Henderson has sent us four specimens upon *Thalamita* collected in 1887 in shallow water. The parasite produces a very slight deformation of the carapace. The female is at once distinguished from that of *Portunicepon portuni*, Kossm., by having only two dorsal bosses, upon the sixth and seventh thoracic segments (that of the sixth segment much larger than the following one). The fringes of the pleal appendages are fine but unequal, and the pleon is less elongated than in *Grapsicepon*. The male is much degraded; the pigment is scanty, and the lateral lobes of the pygidium are nearly confounded with the median portion; the pleal feet are very rudimentary; nevertheless they exist, while, according to Kossmann, they are entirely wanting in *Portunicepon portuni*. The ventral buttons are not very visible and much less prominent than in *Grapsicepon*. In fact, as might be expected from the systematic position of the host, the parasite of the *Thalamita* especially resembles the Cepons of *Portuni*, and we place it provisionally in the genus *Portunicepon*.

Hitherto the Bopyrians have been met with upon the Crustacea which live in small bays with quiet water. *Grapsicepon Edwardsi* shows us that the Sargasso Sea also furnishes conditions of medium favourable to these animals; moreover, we already know there *Bopyroides latreuticola*, Gissler, a parasite of *Latreutes* (*Hippolyte*) *ensiferus*, M.-Edw. But a recent discovery demonstrates that even the Crustacea of great depths are not exempt from the attacks of the Epicarides. Prof. A. Milne-Edwards has kindly sent us a superb Bopyrian, *Pleurocrypta formosa*, G. & B., which is parasitic upon *Ptychogaster formosus*, A.M.-Edw., a splendid species of Galatheid dredged at a depth of 946 metres at the Canary Islands, during the voyage of the 'Talisman.' We shall shortly publish a description of this Epicarid; but we cannot conclude this note without publicly thanking MM. A. Milne-Edwards, A. Agassiz, and J. R. Henderson for the valuable materials of which they have enabled us to make use.—*Comptes Rendus*, July 2, 1888, pp. 44-47.

On Henops brunneus, Hutton.

By W. M. MASKELL, F.R.M.S.*

About October last a resident in the Wairarapa district sent down to the Colonial Museum a few twigs of apple quite covered over with some black substance, amongst which were slowly crawling about half a dozen rather large flies; and he desired some information on this, which he considered as a new "blight," stating that it occurred on both apple- and peach-trees in his garden. The specimens were referred to me; and at first sight I thought the sooty-black coating to be the usual fungus accompanying scale-insects, the flies being unconnected with it. Closer examination, however, showed that

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