

I would therefore now submit to malacologists, as I have shown that no existing genus can with propriety receive this curious creature, that a new one be constituted for it, and entitled *Barleeia*, as a just recollection of the exertions of a gentleman who loses no opportunity of enriching science with living objects from the Great Book of Nature; and though the present animal is locally common, it is malacologically an almost unrecorded rarity. We may all blush for our carelessness in not noticing this interesting and unique species, which, though within the range of many naturalists, would still probably have remained in obscurity if it had not been *déterré* and forced into notice by our invaluable friend.

I am, Gentlemen,

Your most obedient servant,

WILLIAM CLARK.

P.S.—Errata in the paper on the genus *Truncatella* in the last July 'Annals:'—vol. xii. p. 7. line 24, for *branchial*, read *oesophageal* streamlets. And *ibid*, p. 6, for Della Chiaje, read Delle Chiaje.

## XII.—Description of several new species of British Crustacea.

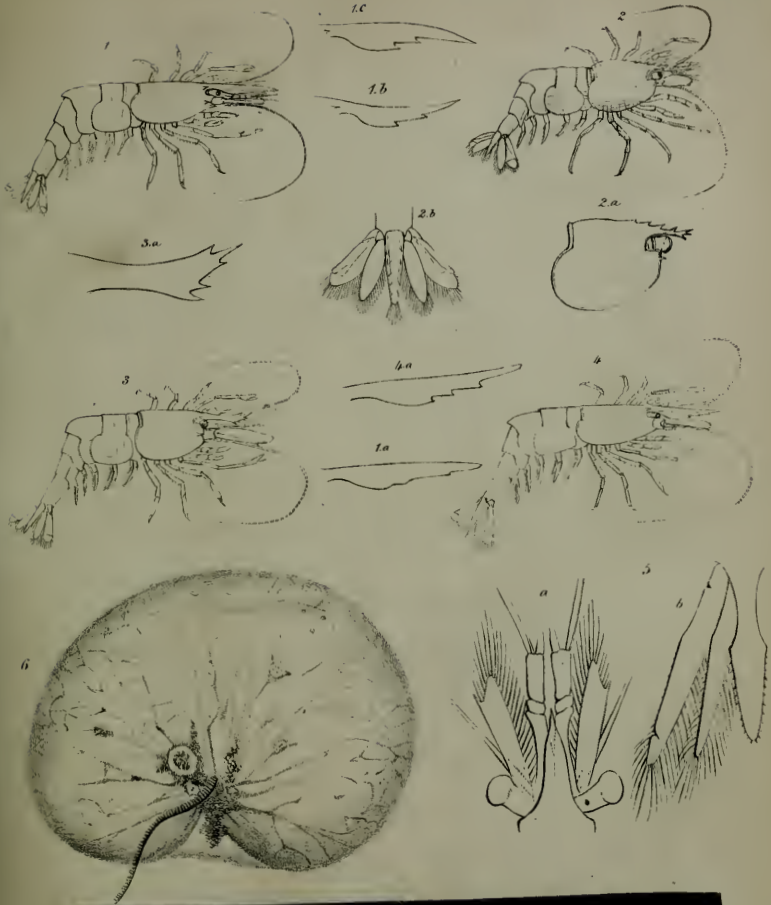
By WILLIAM THOMPSON, Esq.

[With a Plate.]

HIPPOLYTE WHITEI (mihl). *White's Hippolyte*. Pl. VI. fig. 1.

*Spec. Char.* Rostrum (fig. 1 *a*) straight, without spines above, and slightly bifid at the apex, beneath with a sharp two-toothed carina, and a minute one near the apex; internal antennæ with the thick filament much-curved.

The carapace of this species is more gracile than any other of the genus, and even more slender than in the genus *Palæmon*; it is terminated by a straight and elongated rostrum, without any spine on its upper side; the apex is rather blunt; beneath there is a short carina, which is deepish, and has two teeth: there is besides a very minute tooth close to the apex, which gives the apex the appearance of being bifid; it is, however, not the case, the apex being quite distinct from the spine, which is placed on the lower edge of the rostrum; there is also a small tooth on each side of the base of the rostrum, just over the inner edge of the orbit, and another spine on each side the carapace in a line underneath the antennæ. The scale of the external antennæ is large, longer than the rostrum; its external





tooth is placed at the distance of about one-fourth the length from the extremity. The thicker filament of the internal antennæ is large, and more curved than in *H. varians*.

Abdomen slender, not at all gibbous, much compressed. Last joint of fourth leg jagged on the inner margin. Two long slender spines at the base of the antennæ. External antennæ nearly the length of the animal. Length  $1\frac{2}{8}$  inch.

Colour a lovely dark meadow green, with, whilst alive, a whitish band running down the carapace; one specimen only out of thirty or forty differed, and that was of a flesh-colour. Middle plate of the tail acute, with two pair of minute spines, one pair on each margin.

I took this species for the first time on the 4th of May. I obtained others on the 30th of May, and carrying ova on the 14th of June; the ova appear of a yellowish colour, but as they did not reach below the scales of the abdomen, I did not examine them as I could wish.

I obtained my specimens in four to six fathom water in a weed bed, on a stony bottom, in Weymouth Bay.

This species is exceedingly like *Hippolyte varians*; it is, however, of a much lovelier form and colour. Though larger, it is far more slender than any of the genus.

The main points of difference with *H. varians* are, that the rostrum is more elongated, not so acute at the apex, has no spine on the ridge, and has a minute spine very near the apex on the under side, thus making three spines on the under side. The spines on the carapace are much shorter. The carapace is less gibbous. The scale of the external antennæ is longer and narrower, and the spine is nearer the extremity. The thick filament of the internal antennæ is stouter and more bent, and the animal is larger.

They are more difficult to keep in confinement than many others, and far less lively.

Some I had spent the whole of their time clinging to the fronds of a piece of *Furcellaria fastigiata*, lying the length of the frond, and not across it; and however often I disturbed them, they invariably found their way back.

I have named this species after Mr. Adam White, one of the Assistants at the British Museum.

I have just had some more specimens brought me, amongst which I find one with the rostrum much turned up (fig. 1 *b*),—quite as much so as in *Palæmon varians*;—two with the rostrum curved very much downwards (fig. 1 *c*), giving them a most extraordinary appearance; these I consider provisionally, until I obtain other specimens, as varieties of *H. Whitei*; I propose to name the first *H. Whitei* (var. *ensis*), and the second *H. Whitei*

(var. *falcatus*): should I obtain evidence of their being distinct species, the specific names will then be probably changed.

I now find that some few specimens of *H. Whitei* are of a brownish colour; these had been brought home in a brass box.

HIPPOLYTE YARRELLII (mihi). *Yarrell's Hippolyte*.

Pl. VI. fig. 2.

*Spec. Char.* Rostrum (fig. 2 a) short, bent downwards, incurved at the base, hollowed out above, with four spinous teeth above. The apex tridentate, the upper tooth the longest, the middle tooth longer than the lower one.

The carapace is short and rounded; the rostrum short, bent downwards, and suddenly widening near the apex, armed above with four spinous teeth bent forwards at an acute angle; the first, which is not very prominent, is placed on the carapace at the base of the carina, which forms the continuation of the rostrum; the second immediately in a line with the ocular notch; the third, which is the longest, is placed in a line over the middle of the peduncle of the eye when the eye is directed forward; and the fourth is placed on the rostrum, and about twice its own length from the apex. The upper edge of the rostrum is much hollowed out; the lower edge of the rostrum is straight, with an inclination downwards, unarmed, and ending in an acute angle. The apex is deep and tridentate; it is formed of the tooth just described, and two others projecting beyond it. The upper tooth is longer than the second and slightly inflected; the second is very acute, and longer than the bottom, which appears to be formed by a portion being scooped out. The two upper teeth bend upwards, whilst the bottom bends slightly downwards; this widens the apex.

The scale of the external antennæ extends to more than half the length of the filaments of the internal antennæ. Marginal tooth terminal, not so long as in *H. Cranchii*. Anterior feet extending forwards a little beyond the antennal scale; second pair with the wrist long. The junction of the abdomen and thorax very gibbous.

The process on the posterior margin of the third segment much more prominent, and running more to a point than in *H. Cranchii*.

The middle portion of the tail has five or six pairs of spines placed on it, and not on the margin.

Length about  $\frac{3}{4}$  of an inch; colour brown, blotched with a darker or claret-colour.

I obtained two individuals whilst dredging in Weymouth Bay on the 18th of August 1852, in from five to seven fathom water, on a bed of *Rytiphlæa pinastroides*. One carried ova, which were

of a rich orange-brown. This Hippolyte in its general appearance very nearly approaches *H. Cranchii*, from which it differs in the form and number of the spines on the rostrum and at the apex, the shape of the rostrum, the shape of the third segment of the abdomen, and some other particulars.

I have ventured to name this species after Mr. Yarrell, to whose constant friendship, advice and writings, I attribute my partiality to natural history, and whose kindness at a critical age in my youth taught me to turn my leisure hours to, I hope, a good account.

HIPPOLYTE GRAYANA (mihi). *Gray's Hippolyte*. Pl. VI. fig. 3.

*Spec. Char.* Rostrum (fig. 3 *a*) long, hollowed out above and below; above unarmed, with the exception of one tooth near the apex; beneath with three teeth.

Carapace rather compressed and of a moderate length.

Rostrum long, the upper edge much hollowed out, and the widest part armed with a tooth a little behind the apex; this tooth is shorter than the apex, and curved downwards; the apex is acuminate, and longer than the upper tooth; the base of the teeth placed above and beneath the apex are on a line, and as they are both placed on a carina proceeding from the rostrum, it makes that portion very deep, and gives it an appearance of a tridentate rostrum.

The under side of the rostrum is also much hollowed; its least depth is immediately over the middle of the peduncle of the eye; it then gradually deepens towards the extremity until it attains the greatest depth, when it again turns up, and ends in a tooth just under the apex. It is further armed underneath with a tooth at the point of its greatest depth, and another a little in advance, thus making three teeth on the under side of the rostrum. A sharp tooth is placed over each orbit, and a second on each side of the anterior inferior portion of the carapace. Scale of the external antennæ rather narrow, long, extending beyond the filaments of the internal antennæ, with a tooth on the outer margin, at about one quarter the length of the scale from the extremity; the inner margin appears to be toothed or rather notched.

There is a peculiar process at the end of the scale; the inner margin ends with a curved spine or cilium, and the outer margin has a straight process against which the crooked one closes. I cannot determine whether they have motion or not.

Middle plate of the tail slender, tapering, with two pairs of exceedingly minute spines, only visible with a lens. Abdomen compressed, of even depth as far as the posterior edge of the

third segment, and then becoming suddenly very much contracted, and of almost equal size throughout. The process of the third segment of the abdomen is very prominent.

Colour brown with a reddish tinge in places.

Length about 10 lines.

This species is very easily distinguished by the armature of the head, form of the abdomen, and the shape and armature of the rostrum, in which it approaches no other described British species. I obtained it in four fathom water, stony bottom, Weymouth Bay.

I have named it after Dr. J. E. Gray, the Keeper of the Natural History Department of the British Museum.

HIPPOLYTE MITCHELLI (mibi). *Mitchell's Hippolyte*.

Pl. VI. fig. 4.

*Spec. Char.* Rostrum (fig. 4 a) straight, acuminate, without a spine on the upper portion; beneath with a three-toothed carina, and a small tooth near the apex.

Carapace not at all gibbous, terminated by a straight and elongated rostrum, without a tooth on its upper edge; beneath there is a short carina carrying three teeth: a small tooth is placed near the apex. A small tooth is placed each side of the base of the rostrum over the orbit. Scale of the external antennæ not very broad, but long, extending beyond the rostrum, with an external tooth, which is placed at one-fourth the length of the antennæ from the extremity.

Length 16 lines.

Colour a beautiful clear and dark green.

I obtained nine individuals from amongst a parcel of *Hippolyte Whitei* brought me on the 2nd of July, 1853.

This species at first sight might be taken for *H. Whitei*; it is, however, larger, and the teeth on the rostrum are more numerous.

I was at first disposed to consider this as only a variety of *H. Whitei*, but the fact of finding so many, and all perfectly agreeing, decided me in admitting it as a new species.

I obtained this species by dredging; none carried ova; it was taken in four to six fathom water, on a weedy and stony bottom, Weymouth Bay.

I beg to name this species after Mr. Mitchell, the indefatigable Secretary of the Zoological Gardens, and the successful promoter of the Marine Vivarium, as it is owing to the impetus given to dredging by the demand for marine life, that I am indebted for all the new species now described.