

were present, and I believe that no species of *Teredo* is without them.

The plugging up of the terminal volutions in *Aporrhais* and other Gasteropoda, and the consequent withdrawal of the posterior parts of the animal, are analogous to this operation in *Teredo*; the same principle excites the action in both cases, self-preservation.

It will be observed that the alliance of *Teredo* with *Pholas*, through the apophysary processes, is more decisive than between any two other bivalve families. I trust that I shall not be considered fanciful if I venture to remark, that there are points of analogy between *Teredo* and *Dentalium* so striking as almost to give some weight to the idea that it forms the passage to the Gasteropoda; in support of these views I beg malacologists to observe the similar vermiform character of the animals, the attachment of their posterior parts to the shells by sphincteroid muscles, the peculiar plan of the admission of the water by short siphons in conjunction with the sphincter, the single branchial dorsal lamina on each side, their separation from the body, and other minor analogies. These concordances almost make me think my hypothetical surmises have some foundation, and that the transfer of *Pholas* and *Teredo*, &c., from the bottom to the top of the scale of the bivalves, would not be an injudicious procedure.

I conclude by apologizing for the unreasonable draught I have made on the valuable pages of the 'Annals.'

I am, Gentlemen, your most obedient servant,

WILLIAM CLARK.

XXIX.—*Descriptions of some newly discovered Species and Characters of a new genus of Araneidea.* By JOHN BLACKWALL, F.L.S.

Tribe OCTONOCULINA.

Family SALTICIDÆ.

Genus *Salticus*, Latr.

1. *Salticus obscurus*.

Length of the male $\frac{1}{8}$ th of an inch; length of the cephalo-thorax $\frac{1}{16}$; breadth $\frac{1}{20}$; breadth of the abdomen $\frac{1}{16}$; length of a posterior leg $\frac{1}{9}$; length of a leg of the third pair $\frac{1}{12}$.

Cephalo-thorax large and nearly quadrilateral, projecting a little beyond the base of the falces*, which are small, conical

* The organs of spiders improperly denominated mandibles, as they are situated above the labrum, and, consequently, form no part of the oral apparatus, I have proposed to name *falces*.

and vertical: maxillæ short, powerful, straight, enlarged and rounded at the extremity: lip oval, obtuse at the apex: sternum oval. These parts are of a dark reddish brown colour, the cephalo-thorax being sparingly clad with white hairs. The intermediate eyes of the anterior row are greatly larger and the intermediate eye of each lateral row is much smaller than the rest. Legs short, robust, of a reddish brown colour, the metatarsi and tarsi being the palest; the fourth pair is rather the longest, then the first, and the third pair is the shortest; the femora, genua and tibiæ of the anterior pair of legs are remarkably powerful, the first being very convex on the upper part, and the last densely covered with hairs on their inferior surface. Each tarsus is terminated by two curved claws, below which is a small scopula or brush. Palpi short, and similar in colour to the legs; the radial joint is smaller than the cubital; the digital joint is large, oval, convex and hairy externally, concave within, comprising the palpal organs, which are highly developed, very prominent at the base, provided with a black spine curved into a circular form at their extremity, on the outer side, and are of a red-brown colour. Abdomen oviform, convex above, projecting a little over the base of the cephalo-thorax; it is of a very dark reddish brown colour, having a few white hairs distributed over its upper surface, and on each side of the medial line, at its anterior extremity, there is a short longitudinal streak composed of white hairs, which is not very conspicuous.

I have described this spider from a specimen in the cabinet of Francis Walker, Esq., of Arno's Grove, Southgate, Middlesex, in which locality it was taken in May 1848.

Family THOMISIDÆ.

Genus *Thomisus*, Walck.

2. *Thomisus formosus*.

Length of the female $\frac{1}{5}$ th of an inch; length of the cephalo-thorax $\frac{1}{10}$; breadth $\frac{1}{12}$; breadth of the abdomen $\frac{1}{10}$; length of an anterior leg $\frac{7}{20}$; length of a leg of the third pair $\frac{3}{16}$.

Eyes disposed on the anterior part of the cephalo-thorax in two transverse curved rows, forming a crescent whose convexity is directed forwards; the lateral eyes of both rows, which are seated on tubercles, are larger than the rest, those of the anterior row being the largest of the eight. Cephalo-thorax large, slightly compressed before, broadly truncated in front, convex and glossy: falces short, cuneiform, vertical: maxillæ convex near the base, pointed at the extremity, and inclined towards the lip, which is rather long and triangular: sternum heart-shaped: the first and second pairs of legs, which are much longer and more powerful

than the third and fourth pairs, are nearly equal in length, the first pair being rather the longer, and are provided on the under side of the tibiæ and metatarsi with two parallel rows of strong spines; the legs of the third pair are the shortest: the palpi are short, and have a curved pectinated claw at their extremity. These parts, which are of a pale green colour in immature females, are greenish yellow in adults. The tarsi are terminated by two curved deeply pectinated claws. Abdomen oviform, sparingly supplied with hairs, convex above, projecting over the base of the cephalo-thorax; the upper part is of a bright red colour, paler in the medial region, and has a few obscure transverse lines of a lighter hue above the spinners; the sides are yellowish white, and the under part is pale red mottled with yellowish white spots. Sexual organs brownish black.

The male, though rather smaller and slenderer than the female, resembles her in colour, with the exception of the cephalo-thorax and its appendages which are red; the legs also have the same relative length, but their absolute length is greater, an anterior one measuring $\frac{2}{4}\frac{3}{8}$ ths of an inch. The radial joint of the palpi, which is rather stronger than the cubital, projects a large pointed apophysis from its extremity, on the outer side; the digital joint is oval, pointed at its termination, convex and hairy externally, concave within, comprising the palpal organs, which are moderately developed, not very complicated in structure, and are of a red colour. The concavity of the digital joint does not extend to its extremity, which is compact.

An adult male and female of this handsome species, captured at Southgate in 1848, the former in May and the latter in June, are in Mr. Walker's cabinet.

Genus *Philodromus*, Walck.

3. *Philodromus Clarkii*.

Length of the male $\frac{1}{7}$ th of an inch; length of the cephalo-thorax $\frac{1}{16}$; breadth $\frac{1}{8}$; breadth of the abdomen $\frac{1}{6}$; length of a leg of the second pair $\frac{5}{8}$; length of a leg of the fourth pair $\frac{1}{4}$.

Cephalo-thorax nearly circular, slightly compressed before, convex, with a small indentation in the medial line of the posterior region: falces small, conical, vertical: maxillæ gibbous near the base, inclined towards the lip, and convergent at the extremities: lip triangular: sternum heart-shaped: legs long and slender, provided with hairs and spines; the second pair is the longest, then the first, and the fourth pair is the shortest. These parts are of a red-brown colour freckled with minute spots of a deeper hue. Each tarsus is terminated by two curved pectinated claws,

below which is a small scopula. The palpi are short and resemble the legs in colour; the radial joint is smaller than the cubital, and projects a large and somewhat pointed apophysis from its extremity, on the outer side; the digital joint is of an irregular oval figure, being convex at the base and depressed near the middle; it is hairy externally, concave within, comprising the palpal organs, which are moderately developed and not very complicated in structure; a long, slender, black spine, prominent at its origin on the inner side, is curved round their extremity, and they are of a red-brown colour. The concavity of the digital joint does not extend to its termination, which is compact. Eyes disposed on yellowish white spots on the anterior part of the cephalo-thorax in two curved transverse rows, forming a crescent whose convexity is directed forwards; the lateral eyes of each row are seated on small but distinct prominences. Abdomen oviform, sparingly clad with hairs, convex above, projecting a little over the base of the cephalo-thorax; its colour is red-brown, palest on the sides, freckled with minute spots of a darker hue; on the upper part a series of oblique, not very distinct, yellowish white spots occurs on each side of the medial line; these series are slightly curved, and, as their extremities meet, describe a long narrow oval.

In connecting the name of the Rev. Hamlet Clark with this species, I pay a just tribute to the merits of a zealous and intelligent naturalist, and, at the same time, gratify my feelings of friendship and esteem for a relative to whom I am obliged for numerous specimens of spiders, and also for an opportunity of inspecting Mr. Walker's highly interesting collection of British *Arachnida*.

A specimen of *Philodromus Clarkii*, taken at Southgate in June 1849, is in the cabinet of Mr. Walker.

Family LINYPHIIDÆ.

Genus *Neriëne*, Blackw.

4. *Neriëne apicata*.

Length of the male $\frac{1}{12}$ th of an inch; length of the cephalo-thorax $\frac{1}{24}$; breadth $\frac{1}{30}$; breadth of the abdomen $\frac{1}{24}$; length of a posterior leg $\frac{3}{20}$; length of a leg of the third pair $\frac{1}{9}$.

Cephalo-thorax oval, convex, glossy, with an indentation in the medial line of the posterior region; an obtuse conical prominence, surmounted by a tuft of short hairs, occurs immediately behind the eyes, near the base of which, on each side, is a small cavity: falces conical, vertical, somewhat divergent at their extremities, and armed with teeth on the inner surface: maxillæ enlarged where the palpi are inserted, obliquely truncated at the

extremity, on the outer side, and inclined towards the lip, which is semicircular and prominent at the apex: sternum heart-shaped, broad, convex and glossy. These parts are of a very dark reddish brown colour. Eyes disposed on the anterior part of the cephalo-thorax; the four intermediate ones describe a trapezoid whose anterior side is the shortest, and those of each lateral pair are seated obliquely on a tubercle, and are contiguous; the anterior eyes of the trapezoid are the smallest of the eight. Legs moderately long, provided with hairs; the fourth pair is the longest, then the first, and the third pair is the shortest; they are of a reddish brown colour, the femora being the reddest. Each tarsus is terminated by three claws; the two superior ones are curved and slightly pectinated, and the inferior one is inflected near its base. The palpi resemble the legs in colour, but are rather paler; the humeral joint is somewhat curved towards the cephalo-thorax; the cubital joint is clavate, and the radial, which is short, has two curved, pointed, black apophyses at its extremity, in front, the superior one being the larger and more prominent; the digital joint is oval, convex and hairy externally, concave within, comprising the palpal organs, which are moderately developed, complicated in structure, and of a reddish brown colour. The abdomen is oviform, sparingly clad with hairs, convex above, projecting over the base of the cephalo-thorax, and is of a brownish black colour. The branchial opercula are brown.

A male of this species, having the palpal organs completely developed, was found on a rail at Oakland in February 1850.

Genus *Walckenaëra*, Blackw.

5. *Walckenaëra Hardii*.

Length of the male $\frac{1}{6}$ th of an inch; length of the cephalo-thorax $\frac{1}{12}$; breadth $\frac{1}{16}$; breadth of the abdomen $\frac{1}{16}$; length of an anterior leg $\frac{1}{4}$; length of a leg of the third pair $\frac{1}{5}$.

This species, which is nearly allied to *Walckenaëra cuspidata*, has the cephalo-thorax oval, convex, glossy, prominent before, with an obtuse conical protuberance situated in the space surrounded by the eyes, a little in advance of the posterior pair, immediately behind which is a small tuft of hair: falces powerful, conical, divergent at the extremities, armed with teeth on the inner surface, and inclined towards the sternum, which is heart-shaped: maxillæ moderately strong, obliquely truncated at the extremity, on the outer side, and inclined towards the lip, which is semicircular and prominent at the apex: legs provided with hairs; the anterior and posterior pairs, which are the longest, are equal in length, and the third pair is the shortest. These parts are red-brown, the lip being much the darkest, and

the legs the lightest coloured. Each tarsus is terminated by three claws; the two superior ones are curved and minutely pectinated, and the inferior one is inflected near its base. Eyes disposed on the anterior part of the cephalo-thorax; those of the posterior pair are wide apart, and form with those of the anterior pair, which are the smallest and near to each other, a trapezoid whose anterior side is much the shortest; the eyes of each lateral pair are placed obliquely, and are the largest of the eight. Palpi red-brown, the radial and digital joints being much the darkest; the humeral joint is curved towards the cephalo-thorax, and the cubital and radial joints are clavate, the latter, which is the stronger, projecting two apophyses from its extremity, the larger situated in front, and the smaller on the under side; the digital joint is oval, convex and hairy externally, concave within, comprising the palpal organs; they are moderately developed, complicated in structure, with a small curved spine, enveloped in membrane, at their extremity, and are of a dark reddish brown colour. The abdomen is oviform, sparingly clad with hairs, and brownish black. The branchial opercula are yellowish brown.

I have named this spider in compliment to James Hardy, Esq., of Penmanshiel, Berwickshire, North Britain, whose various contributions to entomology are duly appreciated by zoologists. It was sent to me by Mr. Hardy in December 1848, with other specimens of *Araneidea* captured by him in Berwickshire.

Family EPËIRIDÆ.

Genus *Epëira*, Walck.

6. *Epëira signata*.

Length of an immature male $\frac{3}{16}$ ths of an inch; length of the cephalo-thorax $\frac{1}{12}$; breadth $\frac{1}{14}$; breadth of the abdomen $\frac{1}{10}$; length of an anterior leg $\frac{7}{24}$; length of a leg of the third pair $\frac{3}{20}$.

Eyes disposed in two transverse rows on the anterior part of the cephalo-thorax; the four intermediate ones form a square, and each lateral pair is seated obliquely on a small prominence. Cephalo-thorax convex, rounded on the sides, compressed before, with an indentation in the medial line of the posterior region; it is well supplied with white hairs, particularly on the anterior part, and is of a dark red-brown colour, which is most intense on the sides; a conspicuous yellowish white spot occurs in the angle formed by the furrows which serve to distinguish the head from the thorax. Falces conical, vertical, and armed with two rows of teeth on the inner surface; they are of a red-brown colour, and are darkest at the base, in front. Maxillæ short, straight, enlarged and rounded at the extremity: lip nearly semicircular, but somewhat pointed. Sternum heart-shaped.

These parts are of a dark red-brown colour, with the exception of the extremities of the maxillæ and lip, which are much paler. Legs robust, provided with hairs and spines; they are of a pale reddish brown colour, with streaks, spots and annuli of a deeper hue. The palpi are short and resemble the legs in colour. The specimen from which the description was made had the digital joint of the palpi very tumid, but the palpal organs were not developed, demonstrating that it had to undergo its final change of integument before it arrived at maturity. The tarsi are terminated by the customary number of claws of the usual structure. Abdomen short, broad, sparingly clad with hairs, convex above, projecting over the base of the cephalo-thorax; the upper part is of a dark red-brown colour freckled with numerous minute spots of a lighter hue; near the anterior extremity, on each side of the medial line, is a large, conspicuous, yellowish white spot; the sides are paler than the back, and along the middle of the under part a broad, dark, reddish brown band extends, which comprises two curved, yellowish white lines whose concavities are directed towards each other. The branchial opercula are of a dark reddish brown colour.

This distinctly marked spider, which was captured at Broadstairs in Kent, in the month of September, occupies a place in Mr. Walker's cabinet.

7. *Epëira ornata*.

Length of the female $\frac{1}{4}$ th of an inch; length of the cephalo-thorax $\frac{1}{9}$; breadth $\frac{1}{10}$; breadth of the abdomen $\frac{1}{8}$; length of an anterior leg $\frac{5}{16}$; length of a leg of the third pair $\frac{5}{24}$.

Cephalo-thorax somewhat oval, slightly compressed before, glossy, convex, with an indentation in the medial line of the posterior region: falces powerful, conical, vertical, armed with two rows of teeth on the inner surface: maxillæ short, strong, straight, and greatly enlarged and rounded at the extremity: lip nearly semicircular, but rather pointed: legs robust, provided with hairs and spines: palpi short, with a curved pectinated claw at their extremity. These parts are of a dull yellow colour tinged with red, the extremities of the maxillæ and lip being much the palest. Sternum heart-shaped, dull yellow marbled with red. Eyes disposed in two transverse rows on the anterior part of the cephalo-thorax; the four intermediate ones form a square nearly, the posterior side being rather the shortest; the eyes of each lateral pair, which are contiguous, and those of the anterior intermediate pair are seated on small prominences. Abdomen oviform, thinly clad with hairs, convex above, projecting over the base of the cephalo-thorax; it is of a fine bright red colour, palest on the sides and under part; a series of minute indenta-

tions of a light yellow hue extends along the upper part, on each side of the medial line. The branchial opercula are yellow, and a long pale process connected with the sexual organs is directed backwards.

A specimen of this showy *Epëira* is in Mr. Walker's cabinet. It was taken in April 1848, but in what locality is not stated.

Tribe SENOCULINA.

Family DYSDERIDÆ.

Genus *Schænobates*, Blackw.

Eyes six, disposed on the anterior part of the cephalo-thorax; four, situated near the frontal margin, describe a transverse curved row whose convexity is directed backwards, and behind each lateral eye another is placed.

Maxillæ very powerful, short, broad, gibbous near the base, somewhat enlarged and rounded at the extremity, and slightly inclined towards the lip.

Lip large, triangular.

Legs moderately long and robust; the anterior and posterior pairs, which are the longest, are equal in length, and the third pair is the shortest.

8. *Schænobates Walkeri*.

Length of the male $\frac{1}{8}$ th of an inch; length of the cephalo-thorax $\frac{1}{16}$; breadth $\frac{1}{20}$; breadth of the abdomen $\frac{1}{20}$; length of an anterior leg $\frac{3}{16}$; length of a leg of the third pair $\frac{1}{8}$.

Legs moderately robust, provided with hairs and a few spines; they are of a yellowish brown colour, with the exception of the femora of the first and second pairs, which are dark brown. Each tarsus is terminated by two small curved claws. Cephalo-thorax oval, convex, with an indentation in the medial line of the posterior region; it is of a red-brown colour, somewhat darker on the margins, and has several rows of white, iridescent, scale-like hairs on the sides, which converge towards the centre. Falces subconical, without teeth on the inner surface: sternum heart-shaped. These parts, with the maxillæ and lip, are of a red-brown colour. The humeral joint of the palpi is dark brown, the cubital yellowish brown, and the radial, which has a small pointed apophysis at its extremity, in front, is reddish brown; the digital joint is oval, convex and hairy externally, concave within, comprising the palpal organs; they are highly developed, prominent, not very complicated in structure, and are of a reddish brown colour. Abdomen oviform, convex above, projecting a little over the base of the cephalo-thorax; its colour is dark

brown mingled with yellowish brown; white, iridescent, scale-like hairs are distributed over its surface, and a spot composed of dense white hairs occurs immediately above the spinners.

The spider from which the foregoing description was made is preserved in Canada balsam, and has suffered from compression; consequently, my account of it is not so complete as it would have been could I have examined it more perfectly. After a most careful and prolonged inspection under the microscope I could not ascertain that it had more than six eyes, which are arranged in the order stated above; but even should it ultimately be found to possess eight of those organs, it must still, by its other essential characters, constitute a new genus.

I feel sincere pleasure in dedicating this remarkable species to Francis Walker, Esq., F.L.S., a distinguished naturalist, well-known to the entomological readers of the 'Annals and Magazine of Natural History' by his valuable papers on *Aphides*; and I gladly avail myself of this opportunity to express my thanks to Mr. Walker for his liberality in permitting me to publish descriptions of any *Araneidea* contained in his cabinet which I suspected to be unknown to arachnologists.

Schænobates Walkeri was taken at Broadstairs in Kent in the month of September, and is in Mr. Walker's collection of *Arachnida*.

XXX.—*Descriptions of a new genus and six new species of Saurian Reptiles.* By P. H. GOSSE, A.L.S.

Family IGUANADÆ.

1. *Anolis iodurus*. The Purple-tailed Anolis. Crest on the nape prominent: ventral scales smooth, roundish; those of the back small, many-sided, keeled; those of the sides granular: tail rather compressed, slightly crested. ♂. Length of body 2 inches; of tail 3 inches; total 5 inches. Glaucous green, marked with irregular waved lines of a darker shade; upper surface of the head marked with pale dots, confluent: sides yellow-green, sometimes brassy: basal portion of the tail brilliant light purple; the terminal two-thirds pale brown: under parts of the body and limbs pale glaucous: goitre bright orange.

The colour changes under the excitement of fear or anger to sooty brown, usually paler on the part which before was purple; the legs appear banded with transverse pale lines: under parts brownish gray, obscurely spotted with brown.

Sometimes the general colour is a chaste gray, tinged with reddish violet on the neck and shoulders; the purple of the tail bright.



Blackwall, John. 1850. "Descriptions of some newly discovered species and characters of a new genus of Araneida." *The Annals and magazine of natural history; zoology, botany, and geology* 6, 336–344.

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