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XVI.—Carabideous Insects collected by Charles Darwin, Esq., during the Voyage of Her Majesty's Ship Beagle

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mily has probably suggested the remark by Prof. Don, that the recent species "constitute the remains of a class of plants which belonged to a former vegetation."

The interesting specimens of fossil fructification, apparently furnished with a stem, belonging to this family, which exist in the collections of the British Museum, Mr. Bean of Scarborough and Mr. Saull of London, etc., have not been alluded to in this paper; they probably constitute a new genus from being generally associated with fronds having a peculiar character, first pointed out to me by M. König; and I shall reserve any remarks on this subject until I have completed some observations on the internal structure of the stem and its affinity to *Zamites*.

XVI.—*Carabideous Insects collected by Charles Darwin, Esq., during the Voyage of Her Majesty's Ship Beagle*. By G. R. WATERHOUSE, Esq.

[Continued from vol. vi. p. 355.]

Genus FERONIA.

Sp. 1. *Feronia Corinthia*, Dejean, *Spécies général des Coléoptères*, tom. iii. p. 304.

Molops Corinthia, Germ. Col. sp. nov. p. 21.

Of this species Mr. Darwin obtained many specimens at Maldonado, La Plata, and two specimens are labelled 'Monte Video.' It is the *Carabus striatulus* of Fabricius, the original specimen of which is contained in the Banksian collection. I speak without hesitation, having compared Mr. Darwin's specimens with the original, with Dejean's description, and also with three specimens sent from the continent by different parties, all bearing the same specific name.

The *Feronia Corinthia* is readily distinguished from all the *Feronia* of the southern portions of South America hitherto discovered, by its large size, and the elytra being deeply striated towards the suture and almost smooth externally. The *Feronia chalcea* of Dejean is closely allied to the present species, having very nearly the same general form and similar sculpturing to the elytra; but in size it is much inferior, *F. Corinthia* being 8 lines in length, whilst *F. chalcea* is only $5\frac{3}{4}$ to 6 lines in length; the former is brassy black, and the latter is of a brassy colour inclining to æneous.

Sp. 2. *Feronia chalcea*, Dejean, *Sp. général des Coléop.* tom. iii. p. 308.

Four specimens of this species were brought from Maldonado, La Plata, by Mr. Darwin.

Sp. 3. *Feronia cordicollis*, Dejean, *Spécies général des Coléop.* tom. iii. p. 306.

Seven specimens of this species occur in Mr. Darwin's collection, five of which are from Monte Video, and two from Maldonado, La

Plata. It is easily distinguished from other Patagonian *Feronia* hitherto discovered by its comparatively depressed form, the small size of its head, cordiform thorax, black colouring, and the want of wings. By candle-light the elytra display a beautiful iridescence (steel-blue being the prevailing colour), as in the *Pterostichus brunnipes* or *iridipennis* of Stephens; in size it very nearly agrees with that insect; but the *F. cordicollis* has a much smaller head and thorax, and the latter is more attenuated behind.

A specimen of this species has been sent to Mr. Hope with the specific name of *obsidianus*, but I have not yet found it described under that name.

Sp. 4. *Feronia Dejeanii*.

Fer. alata, nigra, nitida; thorace cordato, posticè foveis duabus impressis; elytris elongatis subparallelis, distinctè striatis, interspatiis aliquantò convexis.

Long. corp. $7\frac{1}{2}$ lin.; lat. $2\frac{1}{2}$ lin.

Hab. Monte Video.

This species resembles the *Feronia Corinthia* of authors, but is a trifle less than that insect; the thorax is less convex, and although considerably contracted behind, is less suddenly so than in *F. Corinthia*; the posterior foveæ are large and shallow, instead of being in the form of a deep longitudinal groove; the elytra are distinctly striated throughout, and not, as in the species last mentioned, obliterated on the outer portion of each elytron. The present insect, moreover, differs in being of a black colour—there is perhaps a slight trace of the æneous tint.

From *Feronia cordicollis*, which is found in the same locality, and which, in the somewhat depressed form of the thorax, it resembles, the *F. Dejeanii* may be at once distinguished by the comparatively large size of its head, its possessing wings, the thorax being rather less contracted behind, the posterior foveæ being broad, the elytra more elongate and of a more parallel form, the striæ impunctate, and the antennæ stouter; its size rather exceeds that of *F. cordicollis*, and consequently that of *F. chalcea*, *F. assimilis*, and *F. simplex* of Dejean.

Description.—Head large, but slightly narrower than the thorax; the eyes rather prominent; two longitudinal deep grooves are situated on the forepart of the head. Thorax truncated behind, the widest part very near the anterior angles, the sides not very much rounded, and the hinder part much narrower than the opposite extremity; the dorsal channel distinct, but not extending either to the anterior or posterior margins; the posterior fovea large, shallow, and impunctate, or at least very nearly so—some very minute punctures being discernible under a strong lens; these foveæ extend to the posterior angles, and occupy nearly two-thirds of the space between them and the dorsal channel. Elytra elongate, the sides nearly parallel, being very indistinctly dilated in the middle; the striæ are rather deep and impunctate, and the interspaces are slightly convex: two impressed points are observable on the second stria from the suture situated on the hinder half of the elytron, and there

is an impression on the third stria situated on the anterior half of the elytra. This insect is of a glossy black colour throughout—on the upper parts there is a very indistinct metallic gloss.

Mr. Darwin found but one specimen of this insect.

Sp. 5. *Feronia submetallica*.

Fer. alata, nigra, suprâ nigro-ænea; thorace sub-cordato, posticè foveis duabus punctulisque impresso; elytris paulò elongatis, subparallelis, distinctè striatis, interspatiis levitèr convexis.

Long. corp. $6\frac{1}{2}$ lin.; lat. $2\frac{1}{3}$ lin.

Hab. Maldonado, La Plata.

This species is about equal in size to the *F. cordicollis* of the same country, and rather larger than the *F. macer* of Europe. In many respects it is intermediate between the *F. Corinthia* (or *striata*) and the *F. cordicollis*; the head is proportionately rather larger than in the latter, but considerably less than in the former species; in the sculpturing of the elytra it greatly resembles the *F. Dejeanii*, and differs from *F. cordicollis* in having the striæ impunctate, and from *F. Corinthia* in having these striæ distinctly continued throughout the surface of the elytra. The thorax is less attenuated behind than in either of these species, being *very nearly* of equal width in front and behind.

Description.—Head triangular in front of the eyes (which are tolerably prominent), suddenly contracted, and cylindrical behind the eyes, with two longitudinal irregular impressions in front: thorax rounded at the sides, and but slightly attenuated and truncated behind, the dorsal channel distinct; the anterior and posterior transverse impressions indistinct, and the posterior foveæ in the form of longitudinal grooves*, rather short and deep and minutely punctured. Elytra moderately long, and but slightly broader in the middle than near the extremities; the striæ moderately deep and impunctate, and the interspaces are slightly convex; two abbreviated striæ near the scutellum; on the second stria from the suture are two impressed points, situated on the hinder half of each elytron, and on the third are one or two similar impressions. The general colour of the upper surface of the body is brassy black; the under parts of the body, as well as the legs, antennæ and palpi, are black.

But two specimens of this species were brought home by Mr. Darwin; one is from Maldonado, La Plata, and the other from Monte Video.

Sp. 6. *Feronia assimilis*, Dejean, Sp. gén. des Coléop., Suppl., tom. v. p. 773.

A *Feronia*, agreeing well with Dejean's description of the above-mentioned species, was found by Mr. Darwin at Monte Video. It is about the same size as the *Feronia macer*, and, like *F. cordicollis*,

* None of the South American *Feroniæ* which I have seen, have more than one fovea on each side at the base of the thorax, and in this respect they differ from those European forms (such as *F. melanaria*) in which there are two channels on each side.

is of a black colour, but may be distinguished from that species by its smaller size, the thorax being almost as broad behind as before, and the palpi, basal joint of the antennæ and the tarsi being pitchy red.

Sp. 7. *Feronia (Pterostichus) Bonellii*.

Fer. aptera, atra; thorace cordato, posticè utrinque bistriato; clytris elongato-ovatis, striatis, striis obsoletè striatis; antennis ad basin piceis; palpis tarsisque rufo-piceis.

Long. corp. $5\frac{1}{2}$ — $5\frac{3}{4}$ lin.; lat. $1\frac{9}{10}$ —2 lin.

Hab. Ynche Island, Chonos Archipelago; Valdivia, and E. Chiloe.

This species is about the same size as the *Feronia oblongo-punctata*, and it also approaches that insect in form; the head is rather narrower, the thorax is narrower, longer, and more attenuated behind; the elytra are of the same ovate form, but a trifle more elongated; the antennæ are also longer. It has the general form and appearance of the species of Bonelli's genus *Pterostichus*.

The eyes are moderately prominent, and the frontal sulci are short and rather deep; the thorax is rather depressed, as long as broad, considerably attenuated behind, and the posterior angles are right angles; there is sometimes a slightly impressed transverse groove in front, and there is also, in some individuals, a transverse groove behind; the dorsal channel is not very distinct; the posterior fovea, on each side, is in the form of a narrow long groove, and is impunctate; the elytra are elongate-ovate, distinctly striated, and the striæ are generally faintly punctured, especially those nearest the suture and towards the base of the elytra; but this is not constant, in some specimens the striæ being impunctate; the elytra are slightly sinuated at the apex and have some distinct impressed points on this part; there are also one or two impressions on the third stria from the suture; the palpi and tarsi are pitchy red, and the three basal joints of the antennæ are pitchy.

The specimens from Ynche Island have the elytra more deeply striated than those from Valdivia; one of the Valdivia specimens is considerably broader than the others, and the elytra have a purplish hue.

Sp. 8. *Feronia ærea*, Dejean, Spé. gén. des Coléop. tom. iii. p. 279.

This appears to be a common species in the neighbourhood of Valparaíso. I have seen many specimens from that locality.—Mr. Darwin's collection contains five. It is very nearly equal in size to the *F. Corinthia*, and of the same brassy black colour; it differs however in having the thorax less convex, rather longer, not so narrow behind, and less suddenly contracted at this part; the elytra are rather deeply striated throughout and are impunctate.

The *Omasus marginalis* of Curtis (Linn. Trans. vol. xviii. p. 191) I have compared, and found to agree with these specimens; they however appear to me to agree with Dejean's description of *F. ærea*, and in Mr. Hope's cabinet there is a similar insect bearing the same name.

Sp. 9. *Feronia Nebrioides*, *Omaseus Nebrioides*, Curtis, Linn. Trans. vol. xviii. p. 191.

In Mr. Darwin's collection are four specimens of this species, two of which are from E. Chiloe, one is from Valparaiso, and the fourth is from Concepcion.

F. Nebrioides greatly resembles *F. area* in colour, form, and sculpturing, but is not more than half its size. The *Feronia erratica* of Guérin (Mag. de Zool. pl. 226. fig. 3.) agrees very nearly with this species, but there is no mention of the brassy tint of the upper parts which is observable in the *F. Nebrioides*; in the figure there is an admixture of green in the colouring.

Sp. 10. *Feronia lucidus*. *Pterostichus lucidus*, Curtis, Linn. Trans. vol. xviii. p. 192.

This species greatly resembles the *F. chalcea* of Dejean; but in that insect the sides and apical portion of the elytra are almost smooth, the striæ being obliterated on those parts as in *F. Corinthia*, whilst in *F. lucidus* the striæ are distinct throughout the elytra.

Sp. 11. *Feronia meticulosa*, Dejean, Spéc. général des Coléoptères, Suppl. tom. v. p. 762.

Three specimens of this species occur in Mr. Darwin's collection; they are from Valparaiso. This insect, no doubt, is allied to that division of *Feronia* called *Steropus*, but is remarkable for having the second, third, fourth and fifth striæ of the elytra less distinct than the sutural stria, and those on the outer margin; in one of the three specimens the intermediate striæ are almost obliterated, but in the others they are more distinctly marked.

Sp. 12. *Feronia (Steropus) marginata*.

This is a new species closely allied to the last, having the intermediate striæ of the elytra almost obliterated; those on the margin of the elytra are remarkably distinct, and give to the insect a peculiar appearance; it is less than half the size of *F. meticulosa*, which is about equal to the *F. octopunctatus*. In both species the elytra appear to be soldered together.

Fer. picea, vel nigra; antennis pedibusque rufo-piceis; thorace subquadrato, angulis posticis rotundatis; elytris oblongo-ovatis, striatis, striis intermediis obsoletis.

Long. corp. $3\frac{3}{4}$ —4 lin.; lat. $1\frac{1}{3}$ — $1\frac{1}{2}$.

Hab. Chile.

This species bears a considerable resemblance to the *Taphria rivalis*. The head is somewhat rounded in front, and the eyes are but little prominent; the frontal grooves are scarcely discernible. The thorax is about one-third broader than the head, about equal in length and breadth, somewhat convex, a little broader before than behind, and the anterior and posterior angles are rounded; the dorsal channel and posterior foveæ are indistinct. The elytra are of an oblong-ovate form, not very much broader than the thorax, and slightly sinuated at the apex; the sutural stria is distinct but not deep, and impunctate; the four following striæ are almost

obliterated, and on the second of these, or the third from the suture, are two distinct, impressed points, the foremost situated towards the base of the elytra, and the other near the middle; on the outer margin of each elytron are three distinct striæ; that nearest the margin has numerous impressed points, and these impressions become more near to each other as they approach the apex of the elytra. The antennæ are rather shorter than the head and thorax taken together, testaceous red at the base, and becoming paler towards the tip, and the palpi are of the same colour; the legs are pitchy red, and the thighs are pitchy; the outer margins of the elytra are pitchy beneath.

Mr. Darwin found numerous specimens of this species both at Valparaiso and Concepcion; they vary a little in the form of the thorax; most of the Valparaiso specimens are a trifle smaller, and have the thorax rather narrower than those from Concepcion; but there are others from Valparaiso, which perfectly agree with the Concepcion specimens, and some which are intermediate.

Sp. 13. *Feronia (Pacillus) Peruviana*, Dejean, Spé. gén. des Coléop., tom. iii. p. 233.

The collection contains several specimens from Callao.

Sp. 14. *Feronia (Pacillus) Chaudoirii*, Guérin, Mag. de Zool. pl. 227. fig. 3. ?

An insect brought by Mr. Darwin agrees very well with Guérin's description of *F. Chaudoirii*; it is closely allied to the *F. unistriatus* of Dejean, but, judging from his description (for I unfortunately have no specimens for comparison), it differs in having the frontal sulci well marked, the mandibles pitchy red, and in being rather larger, viz. $5\frac{1}{4}$ lin. etc.; but upon turning to Guérin's fig. 3. of pl. 227, I find an insect represented which does not at all agree with the description of *Chaudoirii*. I should imagine the figure to be that of some other genus; it is very like a species of *Melanotus*: there must be some mistake.

Sp. 15. *Feronia (Pacillus) Guerinii*.

Fer. nigra, nitida; thorace subquadrato, sulco dorsali mediocri impresso, nec non posticè foveis duabus, punctulisque; elytris distinctè striatis, striis subpunctatis; antennis, palpis tarsisque piceis.

Long. corp. 5 lin.; lat. 2 lin.

Hab. Patagonia ?

But one specimen of this species was found by Mr. Darwin, at sea, about sixty miles from the nearest land (but much further in the direction of the wind), Rio de la Plata. In size it is intermediate between the *F. Peruviana* and the *F. unistriata*, and it is easily distinguished from both these species by its elytra being distinctly striated throughout, the striæ being punctured, and there being small scattered punctures on the hinder portion of the thorax, between the posterior foveæ; compared with *Pacillus cupreus*, it presents the following differences: size a trifle smaller, general form rather nar-

rower, head and thorax decidedly narrower, the latter with the posterior foveæ more marked, and the elytra rather more distinctly striated.

Head narrow, eyes moderately prominent, frontal sulci not deep; thorax subquadrate, the sides slightly rounded; dorsal channel distinct; posterior foveæ in the form of narrow grooves, and rather deep; the space between these foveæ is punctured, but the punctures are not very numerous, and the space between the foveæ and the outer angles of the thorax is impunctate: elytra oblong-ovate, distinctly striated; the striae punctate, but the punctures are not very distinct: antennæ with the three basal joints blackish in the middle, but with the extremities red; the remaining joints brown: palpi pitchy red: legs pitchy black; the tarsi pitchy red. The upper parts of this insect are black, but I fancy I can trace some slight shades of blue, and think it probable it is a dark variety of a species having metallic colouring like the *F. unistriatus*.

I have named this species after M. Guérin-Ménéville, whose works have done much towards the elucidation of the various branches of Natural History, and more especially the entomological department.

Sp. 16. *Feronia (Pacillus) depressa*.

Fer. subdepressa, nigra, supra cupreæ vel æneo-cuprea; thorace subquadrato, posticè utrinque striato; elytris elongatis, subparallelis, distinctè striatis; antennis palpisque fuscis, his atque illis ad basin rufescentibus; pedibus nigris, tibiis piceo-rubris.

Long. corp. $5\frac{1}{4}$ — $5\frac{3}{4}$; lat. $1\frac{3}{4}$ —2 lin.

Hab. Monte Video.

This species is a trifle less than *Pacillus lepidus*, and of a more depressed form, and the striae on the elytra are not quite so deep.

Head rather large and obtuse in front; eyes very prominent, the frontal sulci very deep; thorax but slightly convex, nearly square, the sides but slightly rounded, and the fore part somewhat contracted; both anterior and posterior angles rather obtuse; dorsal channel tolerably distinct; posterior foveæ in the form of narrow and tolerably long impunctate grooves, and situated about midway between the dorsal channel and the outer margin of the thorax: elytra somewhat depressed, and having the sides nearly parallel; distinctly striated throughout, the striae impunctate; an impressed point on the second stria from the suture towards the base of the elytra, and two similar impressions on the stria situated on the hinder half of the elytra: antennæ shorter than the head and thorax, and rather thick; the three basal joints testaceous, and the remainder brown: palpi pitchy black, the apical joints somewhat pitchy: legs black; anterior tibiæ pitchy red; tarsi and posterior tibiæ pitchy.

The above description is drawn up from three specimens from Monte Video.

The following species belong to the sub-genus *Argutor*:—

Sp. 17. *Feronia (Argutor) Patagonica*.

Fer. alata, nigra; thorace subquadrato, sulco dorsali mediocri,

foveisque duabus, impresso; clytris piceo-nigris, distinctè striatis, striis impunctatis; antennis, palpis, pedibusque piceo-rubris; abdomine ad apicem rufescente.

Long. corp. $3\frac{1}{2}$ lin.; lat. $1\frac{1}{2}$ lin.

Hab. Maldonado, Monte Video, Sta Fé, etc.

This species may possibly be the *F. oblita*, or perhaps the *F. Bonariensis* of Dejean; but that author has not described those insects with his usual care, and after much trouble I have been unable to satisfy myself on this point. In all the specimens before me (eleven) the elytra are more or less pitchy, the margin is distinctly pitchy red beneath, and the terminal segment of the abdomen is of the same colour, as well as the legs, palpi and antennæ. In Dejean's account of the two species above-mentioned, they are described as black, with pitchy red legs.

Fer. Patagonica is about the same size, or a trifle less than *Argutor vernalis*, but the head and thorax are narrower, and the latter is more contracted behind; the elytra are rather more ovate, and the frontal sulci are more distinct.

Eyes moderately prominent, frontal sulci short and moderately deep; thorax about equal in length and breadth, rather narrower behind than before; the sides form a gentle and even curve from the anterior, almost to the posterior angle, and the outer margin meets the posterior margin so as to form nearly a right, or slightly obtuse, angle; the dorsal channel is distinct, and the posterior foveæ (one on each side) are in the form of narrow grooves; there are no punctures on the thorax: elytra considerably broader than the thorax, and of an oblong-ovate form; the striæ moderately deep and impunctate; a short rudimentary stria is observable on each side near the scutellum.

In some of the specimens the body and thorax are red beneath, but most commonly these parts are of a pitch colour; the terminal segment of the abdomen is always paler than the other parts. The specimens, moreover, vary somewhat in the form of the thorax, the posterior angles being sometimes almost acute, and in one or two of the specimens there is a distinct transverse impression on the hinder part of the thorax; a specimen from Monte Video has no wings. Notwithstanding these differences, I am convinced, after a careful examination, that they are all the same species.

Sp. 18. *Feronia (Argutor) Brullei*.

Fer. alata, piceo-nigra; thorace subquadrato, posticè striis punctulisque impresso; clytris subparallelis, profundè punctato-striatis; antennis palpisque testaceis; pedibus piceo-rubris.

Long. corp. $3\frac{1}{2}$ lin; lat. $1\frac{1}{2}$ lin.

Hab. Sta Fé, Buenos Ayres.

This species very nearly agrees in size with the *Argutor vernalis*, but is of a narrower form, and the antennæ are proportionately longer, reaching, when extended backwards, considerably beyond the base of the thorax. The general colour of the upper parts or the body is black, slightly inclining to pitchy; the suture of the

elytra and outer margins are suffused with pitchy red; the under parts of the body are pitchy black; the mandibles and legs pitchy red, and the thighs assume a deeper hue in the middle; the antennæ and palpi are testaceous. Eyes moderately prominent, frontal sulci small and not deep; thorax subquadrate, slightly attenuated behind, the lateral and posterior margins forming a right angle on each side at their junction; dorsal channel moderately distinct, the posterior fovea on each side in the form of a long narrow groove, which extends to the posterior margin; the space between these foveæ is punctured, but the punctures are not very numerous: elytra considerably broader than the thorax, and with the lateral margins nearly parallel, deeply punctate-striated—no abbreviated striæ near the scutellum.

But one specimen of this insect was brought home by Mr. Darwin; it is easily distinguished from the preceding species by its distinctly punctate striæ. I have named it in honour of one of the authors of the '*Histoire Naturelle des Insectes*' now in course of publication.

Sp. 19. *Feronia (Argutor) Audouini*.

Fer. alata, nigra; thorace subquadrato, angulis posticis subrotundatis, linea transversa striisque duabus impresso; elytris paulò elongatis, profundè striatis, striis impunctatis; antennis palpisque testaceis; pedibus rufo-piceis.

Long. corp. 4 lin.; lat. $1\frac{1}{2}$ lin.

Hab. Sta Fé, Buenos Ayres.

This species is rather larger than *Argutor vernalis*; the antennæ are proportionately longer and more slender; the thorax is almost precisely the same form, excepting that the posterior angles are somewhat rounder; the elytra are considerably longer. Eyes but moderately prominent, and having two rounded and somewhat deep foveæ between them: thorax broader than long, the anterior and posterior parts of equal width, and with the anterior and posterior angles slightly rounded; dorsal channel distinct, and extending from the anterior to the posterior margins; posterior foveæ in the form of long narrow grooves, which extend to the base of the thorax, and are connected by a tolerably distinct transverse groove; there are no punctures on the thorax: elytra elongated, and rather deeply striated; the striæ impunctate.

Sp. 20. *Feronia (Argutor) apicalis*.

Fer. alata, nigra; thorace subquadrato posticè angustiore, angulis posticis obtusis, striisque duabus impresso; elytris nigris vel piceo-nigris ad apicem et marginem externum piceo-rubris; antennis palpisque testaceis; pedibus rufo-piceis.

Long. corp. $4\frac{1}{2}$ —4; lat. $1\frac{2}{3}$ — $1\frac{1}{2}$ lin.

Hab. Maldonado, La Plata.

Three specimens of this species, from the locality just mentioned, are contained in the collection; they all have a distinct pitchy red patch at the tip of the elytra, a character which suggested the name.

Head ovate, eyes but little prominent, two foveæ in front joined by a transverse impression; thorax nearly equal in length and

breadth, rather narrower behind than before, the posterior angles obtuse; dorsal channel indistinct, the posterior foveæ on each side in the form of a long narrow groove, which extends to the hinder margin; no punctures on the thorax: elytra elongate, striated, the striæ impunctate, those nearest the suture the most deep, the others rather faint: antennæ scarcely reaching beyond the hinder margin of the thorax, and of a red colour, as well as the palpi; legs pitchy red; mandibles pitchy. In one specimen, the thorax is pitchy black, and the elytra pitchy; in the other two specimens, the thorax, as well as the head, is black; in all the specimens the outer margins of the elytra are pitchy, and the reflected portion is pitchy red.

This species is considerably larger than either of the preceding, being equal in size to the *Calathus piceus*.

Sp. 21. *Feronia (Argutor) Chilensis*, Dejean, Spéc. gén. des Coléop., tom. iii. p. 251.

Of this species there are three specimens, two of which are from Valparaiso, and the third is from S. Chiloe.

[To be continued.]

XVII.—Observations on a Keratose Sponge from Australia.

By J. S. BOWERBANK, Esq., F.G.S.

To the Editors of the *Annals and Magazine of Natural History*.

GENTLEMEN,

I AM not aware that modern naturalists have published the results of any examination of the structure of the Keratose or Horny Sponges while in that state of perfect preservation, such as they would be if alive, or immediately after their removal from their native element. The skeletons of these curious animals are familiarly known to every naturalist, but in this state they have undergone decomposition of the softer parts of their substance; and the descriptions handed down to us by former writers, based upon the examination of such specimens, have unavoidably led to the propagation of erroneous ideas of their true nature and structure. In a paper read before the Microscopical Society, January the 27th, 1841, I have shown that even in this state they possess a much higher and more complex form of organization than they had hitherto been supposed to exhibit, and that, contrary to received opinions, they are furnished with siliceous spicula, which are imbedded in considerable abundance in some of the larger fibres of their solid horny skeletons.

Since the publication of these facts, I have had the opportunity afforded me by the kindness of Mr. J. E. Gray, of examining a specimen of this class of Sponges which was
Ann. & Mag. N. Hist. Vol. vii. K