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### V.—Description and illustrations of new species of Verrucaria and Sagedia found about Torquay, Devonshire

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I need not say that I was unacquainted with this passage when I received the communication from Mr. Gosse, to whom, I believe, in my reply I mentioned the likelihood of his animal being identical with that discovered by Mr. Cocks and Mr. Alder.

In the paper referred to are many notices of new marine animals, including several zoophytes, to which the attention of the explorers of our seas might well be directed.

The fact of the occurrence of the *Bryarea Scolopendra* in the British seas was first made known by myself, in a communication to the Wernerian Society in 1840; and at the Meeting of the British Association in 1849, when Dr. Ball gave an account of its discovery in Ireland, much information was communicated by several naturalists present respecting this very beautiful and still anomalous animal.

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V.—*Description and Illustrations of new species of Verrucaria and Sagedia found about Torquay, Devonshire.* By RICHARD DEAKIN, M.D.

[With Four Plates.]

VERRUCARIA, Pers.

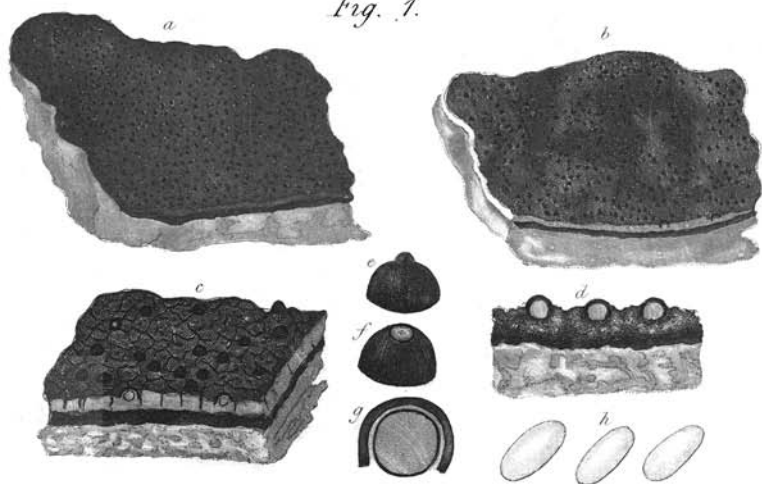
*Apothecia* globose, enclosed within or protruded above the thallus. *Nucleus* gelatinous, enveloped in a tunic, and entirely or partly covered with a black or brownish *perithecium* (not contracted into a neck), perforated with a minute or dilated pore, and often papillated at the apex. *Sporidia* in asci. *Thallus* horizontal, crustaceous.

*V. neglecta.* (Plate I. fig. 1.)

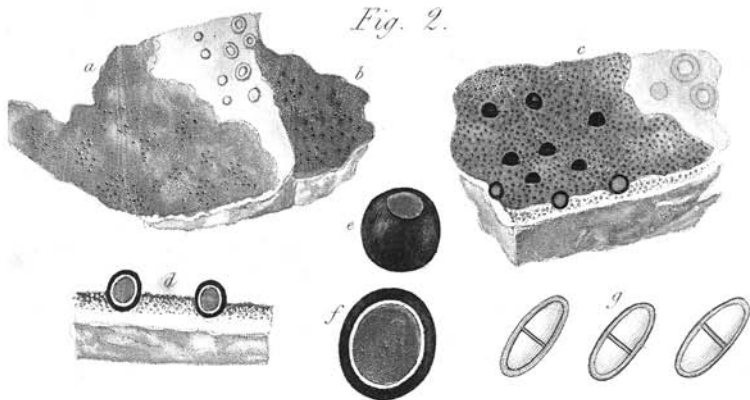
Thallus crustaceous, a dark dull olive-green, warty and uneven, unequally cracked, upon a black substratum, indeterminate; apothecia numerous, crowded, black, immersed, conico-hemispherical, with a naked subpapillated apex and large open pore; perithecium dimidiate; nucleus brown, in a black tunic; sporidia small, oblong, single-celled.

*Thallus* in large, spreading, indeterminate patches, of a dark dull olive-green, uneven, warty, and more or less granulated, irregularly cracked, becoming greener and continuous when moistened, here and there showing the black substratum which forms a thin layer beneath the whole, and often forms a margin beyond the edge of the outer coat. When the plant is grown in shady places and not exposed to the sun, it has a much more powdery appearance, is continuous, not cracked, and in this state closely resembles the *V. trachona*, Tayl. *Apothecia* numerous, crowded, black, at first entirely covered by the thallus and hemispherical, becoming more conical and naked at the apex, often

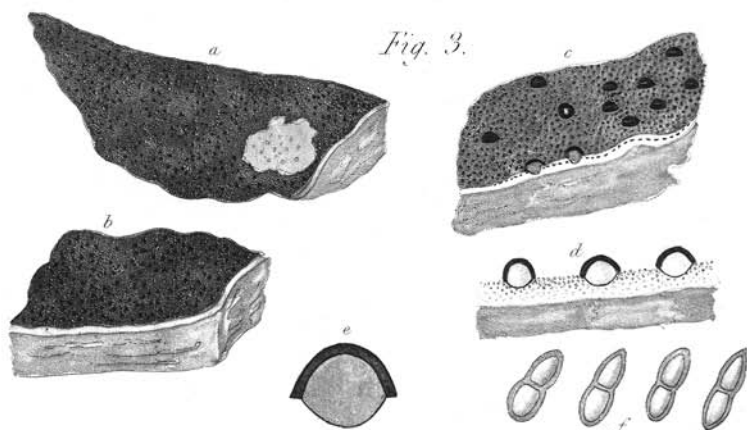
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



with a minute papillated elevation; but as the pore becomes larger and open, this seems to disappear; frequently in exposed parts of the stone, the outer coat of the thallus falls away, leaving the apothecia much more prominent and rough, and attached only to the black substratum. *Perithecium* dimidiate, slightly incurved at the base. *Nucleus* brown, almost black when dry, in a thin black tunic. *Sporidia* in asci eight, small, pale, single-celled, ovate-oblong.

*Hab.* Limestone rocks, Babbicombe near Torquay, Devonshire.

The *Verrucaria trachona* described by Taylor in 'Flora Hibernica,' part 2. p. 93, is not, as is shown by Leighton (British Angiocarpous Lichens, p. 50), the *V. trachona* (Engl. Bot. Suppl.), but an undescribed species; and the *V. trachona* (Engl. Bot. Suppl.), which he supposes to be Acharius's, and like *V. lithina*, Tayl., is a *Pyrenotheca*, and named by him *P. lithina*. Both these species are very different from the above, which is at once distinguished by the black substratum to the thallus; and the sporidia are ovate, single-celled, and not of a fusiform shape and four-celled, as is shown in the *V. trachona*, Tayl., by Leighton. From *Pyrenotheca lithina* they are readily distinguished by the difference in their generic character.

*V. parva.* (Plate I. fig. 2.)

Thallus crustaceous, thin, ashy-gray, continuous, indeterminate, the surface minutely granulated; apothecia minute, globose, black, prominent; pore small, at length widely umbilicated; perithecium entire; nucleus brown, in a pale tunic; sporidia elliptical, two-celled, colourless.

Thallus thin, crustaceous, of a dull ashy-gray colour, becoming of a greenish-brown hue when moistened, spreading in continuous indeterminate patches; the surface, when seen with a magnifying power, rough with minute granular-looking points giving it a powdery appearance; the internal substance white, with green granules thickly scattered amongst it. *Apothecia* very small, numerous, scattered, full, black, globose, half immersed; pore scarcely visible, at length it is widely open and umbilicated, looking like a minute cup. *Perithecium* entire. *Nucleus* brown, in a pale tunic. *Sporidia* in asci eight, elliptical, two-celled, colourless.

*Hab.* Limestone rocks near Torquay, Devonshire.

This little *Verrucaria* may have been overlooked as a variety of *V. rupestris*, but its entire perithecium and two-celled sporidia distinguish it from that species; and its smaller globose apothecia, together with its two-celled sporidia, separate it from *V. murina*, Leight., which has much larger apothecia, and the sporidia are single-celled.

*V. Leightonii*. (Plate I. fig. 3.)

Thallus crustaceous, very thin, continuous, indeterminate, dark brownish-gray, somewhat powdery-looking on the surface; apothecia very small, black, hemispherical; pore minute, at length widely umbilicated; peritheciium dimidiate, neither spreading nor incurved at the base; nucleus pale yellow, in a thin black tunic; sporidia ovate, two-celled, contracted at the septa, yellowish-brown.

*Thallus* very thin, continuous, indeterminate or limited, with a pale margin; the surface is even, but when seen through a magnifying power is minutely powdery-looking, with dark points; when dry it is a dull dark gray or mouse-colour, becoming darker and of an olive hue when moistened; beneath the outer coat and generally through the white substratum are scattered green granular bodies. *Apothecia* at first very small, prominent, hemispherical, without any distinct pore; at length the top becomes flattened, sunk, and has then, from the margins being elevated, the appearance of a *Lecidea*; when moistened it becomes more elevated from the swelling of the nucleus, and is roughish with slightly elevated points. *Peritheciium* dimidiate, thin, covering half the nucleus, neither spreading nor incurved at the base. *Nucleus* pale yellowish-brown, hyaline when moist, in a thick black tunic. *Sporidia* in asci eight, ovate-oblong, more or less pointed or obtuse at the extremities, two-celled, and generally slightly contracted at the septa, dark yellowish-brown, the margin and septa darker.

*Hab.* Limestone rocks near the sea, Torquay, Devonshire.

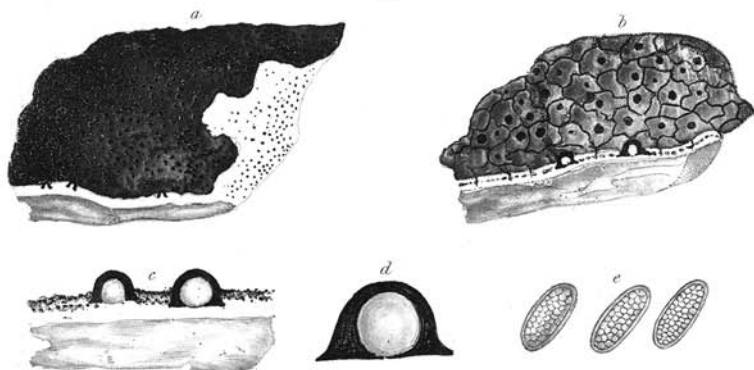
This little plant appears to have been overlooked, or may have been mistaken for a species of *Lecidea*, which the apothecia in an old state resemble; but it will be seen from the description and illustration that its structure is that of a true *Verrucaria*; and it is named in compliment to the Rev. W. A. Leighton, the author of the 'British Angiocarpous Lichens,' in which he has pointed out the way to a more accurate knowledge and satisfactory investigation of the structure of Lichens and their distinctive specific characters.

*V. ovata*. (Plate II. fig. 4.)

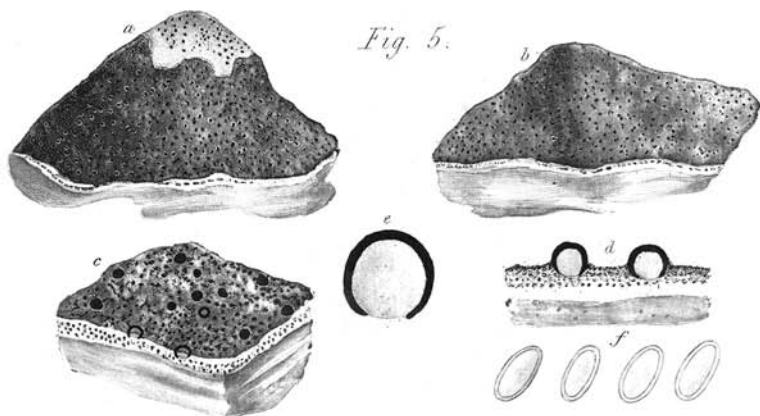
Thallus crustaceous, dark dull olive-green, thin, terminated by a narrow black line cracked into angular areolæ; apothecia black, small, scattered, immersed, hemispherical, the apex becoming naked, depressed; pore minute; peritheciium dimidiate, thick, incurved at the base; nucleus black, in a thin black tunic; sporidia ovate, single-celled, pale yellow, granulated.

*Thallus* thin, in irregular-shaped patches, terminated when growing with other species, which is generally the case, in a

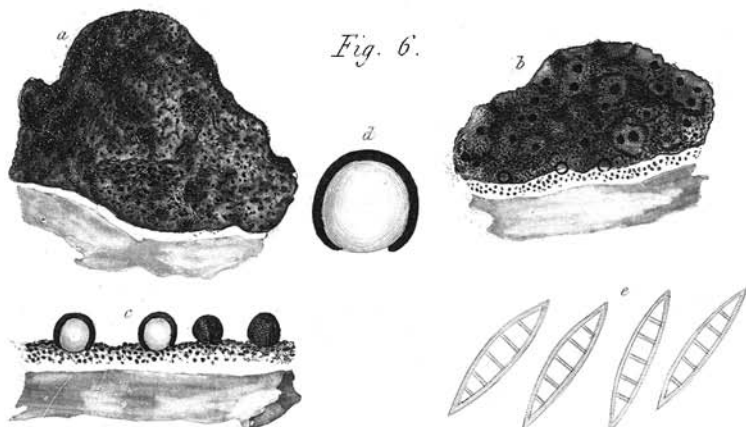
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



narrow, black, often indistinct margin; the surface a dull dark brownish-olive, even and smooth, more or less cracked into angular areolæ, which are not visible when the plant is moistened; beneath the outer coat is a green granular layer upon a white substratum. *Apothecia* immersed in the thallus, which swells about its base; the apex at length becomes naked, and more or less prominent, sometimes conical, but afterwards depressed or flattened; pore minute. *Perithecium* thick, clumsy-looking, and often so swollen and spreading at the base as to appear to entirely envelope the nucleus, but upon careful examination it is found wanting at the base, and the nucleus only separated from the stone by a thin black tunic. *Nucleus* black, becoming white and hyaline when moistened. *Sporidia* in asci eight, ovate, single-celled, pale yellow, granulated or clouded from the contained sporules.

*Hab.* Calcareous rocks near the sea, Torquay, Devonshire.

*V. fugax.* (Plate II. fig. 5.)

Thallus crustaceous, very thin, continuous or scattered, minutely scaly, fugacious, greenish-olive; apothecia minute, scattered, hemispherical, glossy black; pore minute, becoming umbilicated, large and open; perithecium dimidiate, incurved at the base; nucleus pale brown, in a pale tunic; sporidia ovate, single-celled, pale yellow.

*Thallus* crustaceous, very thin, spreading in indeterminate patches, continuous, or sometimes here and there cracked into minute areolæ, apparently soon falling away, leaving a few scattered scales especially about the apothecia, and then pulverulent; it is of a dull brownish-gray when dry, olive-green when moist; beneath the outer coat is a green granular layer upon a white substratum. *Apothecia* numerous, scattered, minute, hemispherical, prominent, glossy black, the base only immersed in the thallus; pore minute, becoming umbilicated, at length open, the top falling away, leaving the remains, a minute ring. *Perithecium* dimidiate, incurved at the base, and enveloping the nucleus except a small space at the bottom. *Nucleus* pale brown, white and hyaline when moist; tunic pale. *Sporidia* in asci eight, ovate, pale yellow, single-celled, often clouded from the contained sporules.

*Hab.* Calcareous rocks, Torquay, Devonshire.

*V. perminuta.* (Plate II. fig. 6.)

Thallus dark olive-green, thin, indeterminate, continuous, uneven, rugose and warty; apothecia scattered or crowded, minute, prominent, brownish-black, globoso-hemispherical; pore minute; perithecium dimidiate, incurved at the base; nucleus



white, in a thin black tunic; sporidia fusiform, six-celled, pale yellow.

*Thallus* thin, in unequal-sized indeterminate patches of a dark olive-green, unchanged by moisture, sometimes of a brownish hue, uneven and somewhat warty, but smooth, not polished; beneath the outer coat is a green granular layer upon a white substratum. *Apothecia* scattered, sometimes several are crowded together, very small, scarcely visible to the naked eye, prominent, globose or hemispherical, black with a brownish hue, sometimes glossy. *Perithecium* dimidiate, incurved at the base, the pore very minute, often not visible, but in an old state it becomes large and open. *Nucleus* white, in a very thin black tunic. *Sporidia* in asci eight, fusiform, tapering at each end, pale yellow, six-celled, with five septa.

*Hab.* Rocks near the sea, Torquay, Devonshire.

Notwithstanding the close affinity in the general appearance and the structure of the thallus and apothecia with *V. trachona*, Tayl., the sporidia are very distinctly different; they are more tapering at the extremities, and have six cells and five septa, while in *V. trachona*, Tayl., they are obtusely pointed at the extremities, have four cells and three septa.

*V. viridis.* (Plate III. fig. 7.)

*Thallus* crustaceous, very thin, grayish-green, cracked into angular areolæ, indeterminate; apothecia small, scattered, black, at length depressed and umbilicated; perithecium prominent, dimidiate, neither incurved nor spreading at the base; nucleus white, in a pale tunic; sporidia elliptical, two-celled, yellow, granulated.

*Thallus* crustaceous, very thin, spreading in indeterminate patches of a dull grayish-green, becoming yellowish-green when moist and somewhat gelatinous, cracked when dry into angular areolæ, the internal substance scattered throughout with green granules. *Apothecia* minute, black, prominent, scattered, hemispherical, becoming depressed, and the minute pore widely umbilicated. *Perithecium* dimidiate, short, neither incurved nor spreading at the base. *Nucleus* white, and hyaline when moist. *Sporidia* in asci eight, elliptical, two-celled, yellow, and granulated with the ultimate sporules.

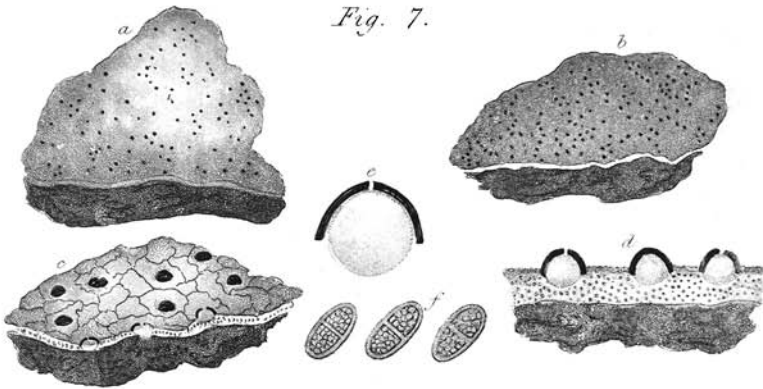
*Hab.* Red Sandstone rocks, Torquay, Devonshire.

The three following species, though not new, have not been, I think, fully illustrated.

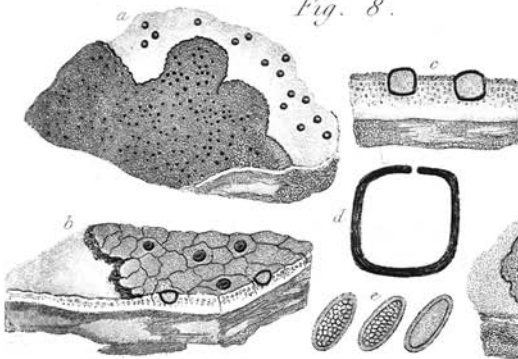
*V. plumbea*, Ach. (Plate III. fig. 8.)

*Thallus* crustaceous, lead colour, terminated by a black margin cracked into small angular areolæ; apothecia small, black, sub-

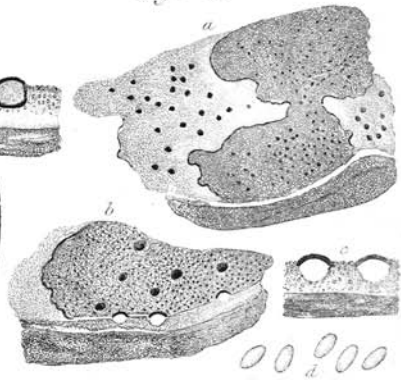
*Fig. 7.*



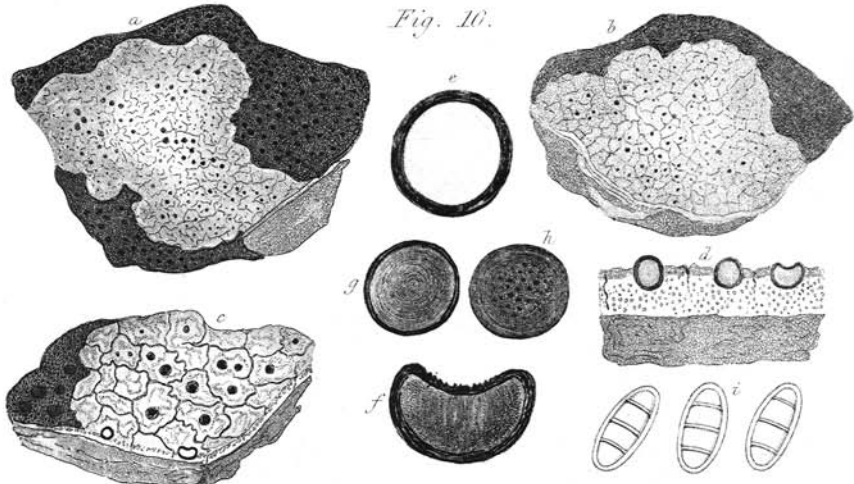
*Fig. 8.*



*Fig. 9.*



*Fig. 10.*



hemispherical, immersed, becoming half-protruded, depressed at the top; pore minute, rarely umbilicated; perithecium entire; nucleus pale brown or white; sporidia elliptical, single-celled, pale yellow.

*Verrucaria plumbea*, Ach. Lich. Univ. 285. Syn. 93; Fries, Lich. Europ. p. 438; Hook. Brit. Fl. ii. 153; Tayl. Fl. Hib. pt. 2. p. 91; Bohl. Lich. Brit. pl. 81.

*Verrucaria cærulea*, DeCand. Fl. Franc. ii. 318; Schær. Lich. Enum. 216. Exs. 102.

*Lichen plumbeus*, Sm. Eng. Bot. 2540.

Thallus crustaceous, rather thin, in irregular-shaped patches, terminated by a somewhat thickened black margin, the surface even or slightly rugged, of a bluish lead-colour, becoming in an old state darker and often brownish, cracked into small angular areolæ; beneath the outer coat is a green granular layer upon a white substratum. *Apothecia* numerous, scattered, one, sometimes two, in an areola, small, black, immersed in the thallus, becoming half-protruded, hemispherical, at length depressed, and a section shows them to be almost square; pore minute, occasionally becoming open and umbilicated. *Perithecium* entire. *Nucleus* white or pale brown, hyaline when moist. *Sporidia* in asci eight, elliptic ovate, single-celled, pale yellow, sometimes granulated.

*Hab.* Limestone rocks in various parts of Europe.

#### *V. Gagei*? Borr. (Plate III. fig. 10.)

Thallus crustaceous, thin, indeterminate, a dull gray or brownish-white, uneven, cracked into angular areolæ; apothecia minute, black, half-immersed, globose, becoming much larger, open and patelliform; perithecium entire; nucleus pale brown; sporidia oblong-ovate, four-celled, colourless.

*Lichen Gagei*, Sm. Eng. Bot. 2580.

*Verrucaria Gagei*, Borr. Hook. Eng. Fl. ii. 153.

Thallus thin, spreading in irregular-shaped indeterminate patches, whitish-gray, and generally with a brownish hue, cracked into small angular areolæ, the surface more or less uneven, not powdery; beneath the outer coat is a green granular layer upon a white substratum. *Apothecia* numerous, scattered, very minute, scarcely visible to the naked eye, black and polished, half-protruded, with an indistinct pore, globose or oblong. *Perithecium* thin, entire. *Nucleus* black when dry, but pale brown and hyaline when moist. *Sporidia* in asci eight, oblong-ovate, four-celled, with the septa colourless.

*Hab.* Sandstone rocks near Florence, Italy.

Such is the normal state of the apothecia, but by age they become much larger, the pore gradually expanding into the appearance of a small disc and minutely granulated, the margin of the perithecium forming an elevated border; but in this state I have not been able to find any sporidia in the asci, nor is the nucleus changed by moisture, as it is in the young state, but remains black; in some of the asci, in those apothecia which are not so fully expanded, I have found sporidia, and they are of a darker colour with the margin and septa brownish.

It is probable that the old state of the apothecia, as above described, was the reason why Sir J. Smith considered his plant an *Urceolaria*, and allied it to *U. Acharii*, to which they have a great resemblance; and it may have been also the reason why Fries was so doubtful respecting it (see *Lich. Europ.* p. 193). I have ventured to keep the name of *V. Gagei* for the above reasons; but in Leighton's *Brit. Anglo. Lich.* p. 63, he says that "the specimens of *V. Gagei*, Borr., and *V. Harrimanni*, Ach., in *herb. Borr.*, showed only on section a black, flat perithecium, with a roundish-yellow spot underneath, no trace of asci or sporidia being discernible."

The sporidia resemble those of *V. prenophora*, Ach. (see *Leight. Brit. Anglo. Lich.* p. 54. tab. 23), but the apothecia are very much smaller and of a different shape, and the perithecium is entire and not dimidiate as in that species.

*V. Harrimanni*, Ach. (Plate III. fig. 9.)

Thallus crustaceous, thin, mouse-coloured, continuous, terminated by a narrow black margin, the surface minutely dotted and powdery-looking; apothecia minute, black, immersed, the apex prominent; pore at length widely umbilicated; perithecium dimidiate, very short; nucleus pale brown, in a pale tunic; sporidia ovate, single-celled, colourless.

*Verrucaria Harrimanni*, Ach. *Univ.* 284. *Syn.* 93; *Hook. Brit. Fl.* ii. 153; *Leight. Brit. Anglo. Lich.* 63; *Schær. Lich. Enum.* 216.

*Verrucaria rupestris*, b, *Fries, Lich. Europ.* 437.

Thallus crustaceous, thin, spreading in irregular-shaped small patches, terminating with a narrow black margin; the surface gray with a reddish hue, minutely dotted and powdery-looking when seen through a magnifying power; beneath the outer coat is a green granular layer upon a white substratum. *Apothecia* minute, scarcely visible to the naked eye, scattered, immersed; the apex black, slightly protruded, hemispherical or flattish; pore at first very minute, becoming open and umbilicated. *Perithecium* dimidiate, slightly immersed at the base. *Nucleus* pale

yellowish-brown, hyaline when moistened, in a pale indistinct tunic. *Sporidia* in asci eight, ovate, very minute, single-celled, colourless.

*Hab.* Limestone rocks near Torquay, Devonshire.

SAGEDIA, Ach. (in part), Fries.

*Apothecia* enclosed within the thallus, globose or obovate. *Nucleus* gelatinous, deliquescent. *Perithecium* membranaceous, at length becoming black. *Pore* distinct, attenuated into a slender neck, dilated at the apex, perforated. *Thallus* horizontal, sub-crustaceous or crustaceous.

*S. ampullacea.* (Plate IV. fig. 11.)

*Thallus* crustaceous, thin, indeterminate, greenish-gray, cracked into angular areolæ, slightly powdery on the surface, pale green when moist; *apothecia* numerous, scattered, immersed, black, ampullaform, the apex hemispherical, slightly protruded; *perithecium* entire; *nucleus* white; *sporidia* irregularly ovate or elliptical, large, granulated, single-celled, pale yellow.

*Thallus* spreading in large indeterminate patches of a greenish-gray, cracked into unequal-sized, variable-shaped, angular areolæ, the surface when magnified having a powdery or minutely warty appearance; when moistened it becomes of a bright yellowish-green, and somewhat gelatinous-looking; beneath the outer coat is a green granular layer upon a white substratum. *Apothecia* numerous, scattered, immersed in the thallus, and forming a cavity in the mortar beneath it, of a medium size and ampullaform shape; the apex small, hemispherical, slightly protruded, black, with a depressed central pore slightly thickened at the top of the constricted neck. *Perithecium* thickish, entire, tough, black. *Nucleus* white, hyaline when moist, in a pale thin tunic, scarcely visible. *Sporidia* in asci eight, large, ovate, oblong, obovate or elliptical, single-celled, pale yellow, granulated.

*Hab.* Growing on the plaster of an old gate-post near Ilsham, Torquay, Devonshire.

*S. calcarea.* (Plate IV. fig. 12.)

*Thallus* crustaceous, thin, hard, continuous, indeterminate, pinkish-gray, dusty-looking on the surface; *apothecia* small, entirely immersed, the apex naked, globose, contracted into a narrow neck; *perithecium* entire; *pore* slightly umbilicated; *nucleus* dark brown; *sporidia* brownish-yellow, large, oblong, two-celled, granulated, contracted in the middle.

*Thallus* spreading in large indeterminate patches, hard and stone-like, continuous; the surface smooth, even, and when seen through a magnifying glass appearing dusty, of a pale pinkish-

Fig. 11.

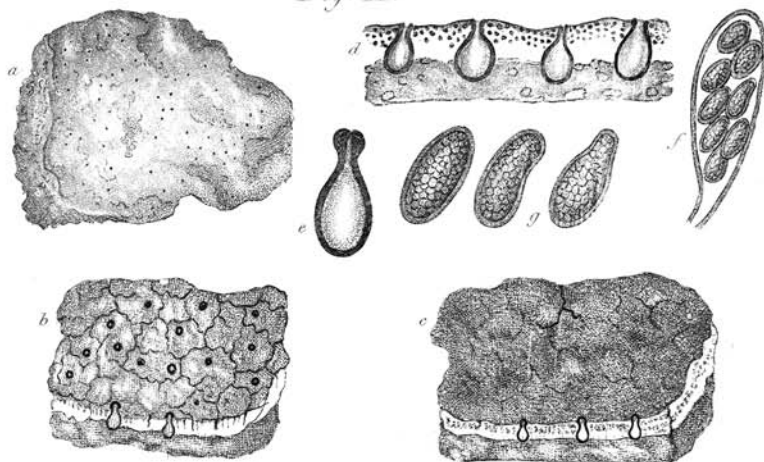


Fig. 12.

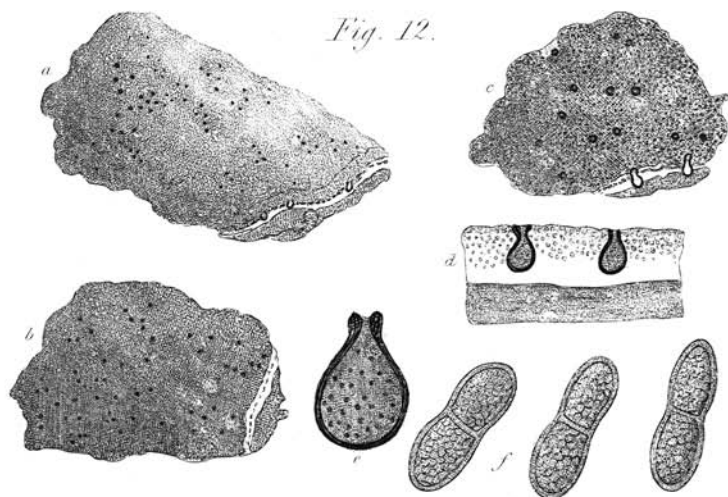
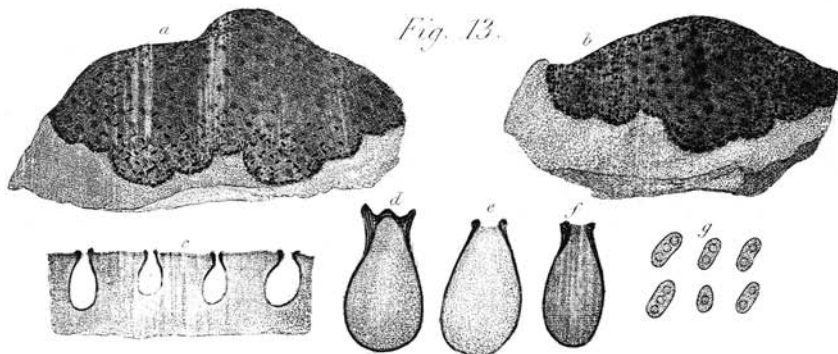


Fig. 13.



gray, sometimes quite pink, becoming of a brownish hue when moistened; beneath the outer coat is a green layer of minute granules upon a hard white substratum. *Apothecia* scattered, entirely sunk in the thallus, of a globose shape, contracted at the top into a narrow neck; the apex small, naked, but not elevated above the thallus, obtuse, with a small, more or less umbilicated pore. *Perithecium* entire, thickish, tough, black. *Nucleus* black, becoming blackish-brown when moistened, and with black granules mixed amongst it. *Sporidia* in asci eight, large, oblong obtuse, two-celled, slightly contracted at the septa, granulated, of a pale brownish-yellow colour.

*Hab.* Limestone rocks, Torquay, Devonshire.

*S. marina.* (Plate IV. fig. 13.)

Thallus crustaceous, subgelatinous when moist, smooth, continuous, dark greenish-black, terminated by a narrow black margin; apothecia very small, numerous, scattered, immersed, the apex slightly elevated; pore minutely papillated; perithecium entire, black, submembranaceous; nucleus black, yellowish and hyaline when moist; sporidia minute, ovate-oblong, single-celled, colourless.

*Thallus* spreading in large, continuous, smooth, even, irregular-shaped patches of a dark greenish-black, becoming of an olive hue when moistened; the surface is somewhat polished, occasionally slightly pitted, at other times with minute elevated points; generally it is perfectly continuous, but in those specimens grown upon rocks less frequently covered by the sea it is cracked; the internal substance when dry is similar in appearance to the outer, but when moistened it is a yellowish-green, darker towards the surface, semitransparent, and of a subgelatinous texture. *Apothecia* very minute, not visible to the naked eye, immersed in the thallus, of an obovate or oblong shape; the apex slightly elevated above the surface of the thallus, depressed in the middle, having a central minutely papillated pore. *Perithecium* entire, thin, submembranaceous, black; when dry almost colourless, when moist more or less contracted towards the top into a neck. *Nucleus* when dry almost black, pale yellowish-brown and hyaline when moist. *Sporidia* minute, ovate-oblong, single-celled, colourless, containing one, two, or three granules.

*Hab.* Rocks submerged by the sea at high-water, Meadfoot, &c., near Torquay, Devonshire.

#### EXPLANATION OF PLATES I. II. III. AND IV.

*Fig. 1.* *Verrucaria neglecta*, Deak. :—*a*, in a dry state; *b*, in a moist state; *c*, slightly magnified; *d*, vertical section of thallus and apothecia magnified; *e*, apothecium with its papillated apex; *f*, the same with the apex fallen away; *g*, vertical section of the same; *h*, sporidia greatly magnified.

- Fig. 2. *Verrucaria parva*, Deak. :—*a*, in a dry state ; *b*, in a moist state ; *c*, slightly magnified ; *d*, vertical section of thallus and apothecia ; *e*, apothecium magnified ; *f*, vertical section of the same ; *g*, sporidia greatly magnified.
- Fig. 3. *Verrucaria Leightonii*, Deak. :—*a*, in a dry state ; *b*, in a moist state ; *c*, slightly magnified ; *d*, vertical section of thallus and apothecia ; *e*, vertical section of apothecium magnified ; *f*, sporidia greatly magnified.
- Fig. 4. *Verrucaria ovata*, Deak. :—*a*, in a dry state ; *b*, slightly magnified ; *c*, vertical section of thallus and apothecia ; *d*, vertical section of apothecium magnified ; *e*, sporidia greatly magnified.
- Fig. 5. *Verrucaria fugax*, Deak. :—*a*, in a dry state ; *b*, in a moist state ; *c*, slightly magnified ; *d*, vertical section of thallus and apothecia ; *e*, vertical section of apothecium magnified ; *f*, sporidia greatly magnified.
- Fig. 6. *Verrucaria perminuta*, Deak. :—*a*, in a dry state ; *b*, slightly magnified ; *c*, vertical section of thallus and apothecia ; *d*, vertical section of apothecium magnified ; *e*, sporidia greatly magnified.
- Fig. 7. *Verrucaria viridis*, Deak. :—*a*, in a dry state ; *b*, in a moist state ; *c*, slightly magnified ; *d*, vertical section of thallus and apothecia ; *e*, vertical section of apothecium magnified ; *f*, sporidia greatly magnified.
- Fig. 8. *Verrucaria plumbea*, Ach. :—*a*, in a dry state ; *b*, slightly magnified ; *c*, vertical section of thallus and apothecia ; *d*, vertical section of apothecium magnified ; *e*, sporidia greatly magnified.
- Fig. 9. *Verrucaria Harrimanni*, Ach. :—*a*, in a dry state ; *b*, slightly magnified ; *c*, vertical section of thallus and apothecia ; *d*, sporidia greatly magnified.
- Fig. 10. *Verrucaria Gagei*? Borr. :—*a*, in a dry state ; *b*, in a moist state ; *c*, slightly magnified ; *d*, vertical section of thallus and apothecia ; *e*, vertical section of apothecium magnified ; *f*, vertical section of an old apothecium ; *g*, apothecium in a perfect state ; *h*, apothecium in an old state ; *i*, sporidia greatly magnified.
- Fig. 11. *Sagedia ampullacea*, Deak. :—*a*, in a dry state ; *b*, slightly magnified ; *c*, in a moist state ; *d*, vertical section of thallus and apothecium ; *e*, vertical section of apothecium ; *f*, sporidia in ascus ; *g*, sporidia greatly magnified.
- Fig. 12. *Sagedia calcarea*, Deak. :—*a*, in a dry state ; *b*, in a moist state ; *c*, slightly magnified ; *d*, vertical section of thallus and apothecia ; *e*, vertical section of apothecium ; *f*, sporidia greatly magnified.
- Fig. 13. *Sagedia marina*, Deak. :—*a*, in a dry state ; *b*, in a moist state ; *c*, vertical section of thallus and apothecia ; *d*, *e*, vertical sections of apothecia in a moist state ; *f*, vertical section of apothecium in a dried state ; *g*, sporidia highly magnified.

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VI.—*Account of a MS. of Laurence Theodore Gronov lately purchased for the British Museum, with a Collection of Dry Fish which it describes.* By JOHN EDWARD GRAY, Ph.D., F.R.S., V.P.Z.S.

A box of dry skins of fish arranged between sheets of cartridge paper like a collection of dry plants, said to be accompanied by