

XXVIII. "On the Fructification of certain Sphæriaceous Fungi." By FREDERICK CURREY, Esq. Communicated by Dr. HOOKER, F.R.S. Received May 14, 1857.

(Abstract.)

The author refers to the recent inquiries into the diversities of form existing in the reproductive organs of Fungi, and notices the physiological importance of the results, and the probable future effect upon systematic arrangement.

Two different classes of Sphæriaceous Fungi are then noticed in detail, in the former of which the different forms of fruit produced are essentially distinct, whilst in the latter the fruit is modified so as to assume a form materially different from the normal form.

The following are the plants included in the former of these classes, with the principal points noticed in each.

1. *Sphæria verrucæformis*, Ehr. The occurrence of an ascigerous and cytisporous state of fructification within the same circumscribing line, and the nature of the cells constituting that line.

2. *Sphæria favacea*, Fr. Points of distinction between it and *S. verrucæformis*. Curious modifications in the shape of the asci.

3. *Sphæria olivacea*, n. s. Aberrant forms of asci, and description of the sporidia.

4. *Sphæria tiliaginea*, n. s. The existence of spermatia and stylospores, and description of the form and modes of growth of those organs.

5. *Sphæria vestita*, Fr. The existence of perithecia and naked spores within a conceptacle common to both, and having a common orifice.

6. *Sphæria fragiformis*, Pers. Description of a secondary form of fruit belonging to the *Sphæria*, hitherto considered to have been a growth parasitical upon it.

7. *Sphæria salicina*, Pers., and *Coniothecium Amentacearum*, Corda. The production of these Fungi (hitherto supposed to be distinct plants) from the same mycelium, and the probability of a similar relation between *Sphæria lanciformis*, Fr., and *Coniothecium betulinum*, Corda.

The following are the plants included in the latter of the two classes, and the principal points noticed with regard to them.

1. *Sphaeria angulata*, Fr. The occurrence of a state of fructification similar to that in the genus *Cryptosporium*; the varieties of structure in the normal sporidia, and the probable origin and nature of the abnormal fruit.

2. *Sphaeria lanciformis*, Fr., and *Hendersonia polycystis*, B. & Br. Irregularity of form in the sporidia of *Sphaeria lanciformis*. The growth of perithecia in the same stroma, some producing the fruit of *Sphaeria lanciformis*, others that of *Hendersonia polycystis*. Notice of the probable existence of a third form of fruit of *Sphaeria lanciformis*.

3. *Sphaeria siparia*, B. & Br., and *Prosthemia betulinum*, Kunze. Constant association of the two forms; their external resemblance; nature of the fruit and other circumstances leading to the conclusion of the identity of the two plants.

COMMUNICATIONS RECEIVED SINCE THE END OF THE SESSION.

- I. "On the Anatomy of *Tridacna*." By JOHN DENIS MACDONALD, Esq., Assistant-Surgeon R.N. Communicated by Sir JOHN LIDDELL, C.B., M.D., Director-General of the Medical Department of the Navy. Received June 25, 1857.

(Abstract.)

The author first explains the peculiar position which the animal of *Tridacna* occupies in its shell, in which it differs from bivalves in general. He then describes the mantle and its borders, the membranous interpallial septum, the respiratory and wide pedal openings communicating with the interpallial space, the two pairs of branchiae, the mouth with the anterior and posterior lip and the four oral palps, the foot, the extensive cloacal cavity with its subdivisions, and the circular contractile cloacal orifice opening on the dorsal surface. He next gives an account of the form and arrangement of the ali-