

Teratological Notes on Plants.—I. By HENRY N. RIDLEY, M.A.,
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[Read November 2, 1882.]

1. *A Monstrosity of Carex glauca*, Scop.—The specimen about to be described was found on a grassy down above Durlleston Bay, at Swanage in Dorsetshire. It consists of a culm which bears two female and two terminal male flower-spikes; both the female spikes are supported on peduncles of some length, (1 centim. in the case of the lowest,) which spring from the interior of utricles; each utricle contains, in addition, a female flower, exteriorly to which arises the peduncle. The lowest male spike springs, in like manner, from a much-

aborted utricle; but the peduncle is so short that it hardly protrudes from it. The bract which subtends this utricle is truncate and broadly dilated, and bears a considerable similarity to the utricular bract at the base of the flower-spikes in *Carex polystachya*, *C. Hartwegii*, &c. The specimen also illustrates very clearly the homology of the seta which is characteristic of the Uncinæ and of the group of Carices known as the Psyllophoræ. Cases have been recorded of the seta bearing rudimentary flowers (Linn. Journ. xiv. p. 154); and there can be little doubt that we have in this instance an example of reversion of the seta to something like its own original form and proportion. In the case of Carices with

Fig. 1.



A. Monstrosity of *Carex glauca*, Scop., showing peduncles of the flower-spikes emerging from utricles.

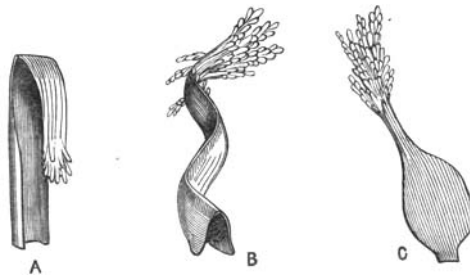
B. One of the utricles in section, showing the positions of the ovary and the peduncle.

compound spikes a similar monstrosity occurs; in these, however, the peduncle is very short, and hardly protrudes from the utricule.

2. *A Case of Pistillody in Lolium perenne*, Linn.—The subject of this note was found growing in a grass-field near Hendon; a considerable number of plants, all similarly affected, formed a conspicuous patch among the normal form, from which they were distinguished by the rather distant, much swollen spikelets. On opening a flower, no reproductive organs were visible, their place being taken by a number of glumes or glume-like bodies; the most exterior of these, which corresponded in position to the stamens, were green linear glumes, the apices of which were abruptly bent down, and terminated by a number of short hairs having the nodulose character of the stigmatic hairs (fig. 2 A). Interior in position to these were one or more conduplicate glumes bent laterally in a zigzag manner; these bore similar but longer hairs upon the midrib and margins, and in greatest quantity upon the apex (fig. 2 B). In addition to these there was a tuft of about six small oval transparent leaves, each of which was terminated by a single stigmatic arm—in fact, single carpellary leaves without any trace of ovules (fig. 2 C).

The specimens illustrate clearly the mode of transition from glumes into pistils. I can find no similar* case recorded; but Gen. Munro mentions a case (Linn. Trans. xxvii. p. 7) in which the points of the anthers of a bamboo were tipped with im-

Fig. 2.



A. Monstrous stamen of *Lolium perenne*.

B and C. Modified glumes replacing the reproductive organs in *Lolium perenne*.

* For an analogous, not identical, case, see Journ. Linn. Soc. vii. p. 121.

perfect styles; and it seems possible that the processes on the appendages of the stamens in certain Cyperaceæ, e. g. *Acrocarpus*, and especially in a plant nearly allied to *Galmia*, collected in tropical Africa by Dr. Welwitsch, and hitherto, as far as I can determine, undescribed, may be rudimentary stigmatic hairs.

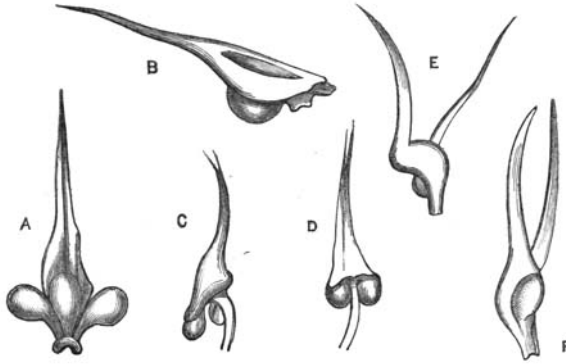
Lolium perenne is probably more subject to malformation than any other grass; this is no doubt due to its habit of growing in waste ground and by-paths, where it is especially liable to injury; and in this case, from the fact that all the plants affected were growing close together in a patch, while the others in the field were unaffected, it is probable that the malformation was due to some accident to the grass at that spot.

3. *Note on Equisetum maximum*, var. *serotinum* (var. *proliferum*, *Milde*).—A specimen of *Equisetum maximum*, answering to the description of this plant in Milde's monograph of the order, occurred among a considerable quantity of the normal form in Durlleston Bay, near Swanage in Dorsetshire. It consists of a vegetative stem which, at some height above the ground, has produced a spike of fructification; this again passes into, and is terminated by, another vegetative portion. The whorl of leaves immediately below the annulus has taken the form of the long leaves characteristic of the fertile stem; all the ones below, however, are similar to those of a normal sterile stem. A longitudinal section of the fruiting portion shows the nodal septa at the base and upper part; they disappear, however, in the centre. The most interesting feature, however, is in the upper part of the spike, where the sporangiophores pass into the normal leaves. In the most slightly modified of these the clypeole produces from the centre an acuminate process, which is in most cases deflected, and is dark brown or black at the apex; in the more modified ones the clypeole has lost its hexagonal shape, and becomes the broad base of the leaf, the leaf-point is longer and passes insensibly into the clypeole. the pedicel is broader and flatter, the sporangia fewer. Finally, the clypeole and pedicel are quite undistinguishable from the rest of the leaf. It is noteworthy that in many cases the primarily single acuminate process becomes cleft, in one case almost as far as the sporanges.

The apical portion of the stem is similar to that of a normal sterile plant, except at the base, where there is a partial whorl of the large leaves characteristic of the fertile stem, at the base of which are one or two sporanges placed exteriorly to the leaf.

Milde, in his monograph of the Equiseta, has given this form the varietal name quoted above; this seems, however, quite unjustifiable, as it is evidently only a monstrosity, due probably to accidental circumstances. It does not appear to be at all common; and I do not find that it has been hitherto recorded as occurring in this country.

Fig. 3.



A, B. Clypeole of *Equisetum maximum* passing into a leaf, from beneath (A), from the side (B).

C, D. Another, more modified, showing the splitting of the primarily entire leaf-point.

E, F. Another, in which the leaf-point is split almost as far as the sporanges; the clypeole now merely an enlargement of the lower part of the leaf.

On a Collection of Exotic Lichens made in Eastern Asia by the late Dr. A. C. Maingay. By Dr. WILLIAM NYLANDER, F.M.L.S., and the Rev. JAMES M. CROMBIE, F.L.S.

[Read December 7, 1882.]

THE Lichens here enumerated and described were collected by Dr. Maingay in British Burmah, the Straits Settlements, China, and Japan, at intervals from 1861 to 1865. After his death they were purchased by Sir Joseph Hooker, along with the collection of Phanerogams made by him in the same regions. The Lichens consisted of specimens mounted by Dr. Maingay for his own herbarium (including numerous British species), and of a mass of fragmentary unmounted specimens contained in a sack with