dentatis.—In the Serra Mey, British Guiana (Rob. Schomburgk, a single specimen.)

3. Tachia Schomburgkiana; foliis quintuplinerviis, calyce 5-alato, laciniis lanceolatis tubo longioribus (demum fere pollicaribus).—On the mountains covered with thick forest between Roraima and the Cuyuni, at an elevation of 3000 to 4000 feet (Rob. Schomburgk, a single specimen. Rich. Schomburgk, n. 1546).

The three species closely resemble each other in general habit, in the shape of the leaves, and in the size of the yellow flowers.

461. Cyathus Hookeri, n. s.; peridio cyathiformi pallido intus striato vel omnino laevi; sporangiis amplis; integamento tenuissimo, cortice nigro, sporis minutis.

HAB. On dead wood, Khasia. On moss and lichen covered with sawdust, Kollong rock, Khasia Hills, 1850. (Dr. Hooker.)

Crowded, pale wood-coloured. Peridium cyathiform, sessile or obsolescently stipitate, clothed with squarrose acute scales, obscurely striate within or quite smooth. Sporangia 1 line broad, wrinkled. Integument very thin; bark nearly black; hymenium thick. Spores obovate, \( \frac{3}{5} \) of an inch long.

The spores of this are smaller than in any species except C. microsporus. It is certainly very distinct.

462. C. Emodensis, n. s.; albidus, campaniformis, basi angustata, subsessilis, superne late apertus, striis plane destitutus, extus fasciculato-tomentosus, margine stellato-ciliato; sporangiis umbrinis laevibus.

HAB. On dead wood, Sikkim. Lachen, 12–13,000 feet. (Dr. Hooker.)

Dirty white. Peridium rather thick, clothed with spongy down collected in little fascicles, quite smooth within; margin fimbriated with the projecting hairs, about 4 lines high, and scarcely so much wide.
Sporangia small, about \( \frac{1}{3} \) a line broad, very abundant, nearly smooth, umber-brown, outer coat often peeling off. Spores obovate, sometimes rather pointed below, \( \frac{1}{3} \) of an inch long.

Distinct from *C. vernicosus* in colour, the more tomentose peridium, umber-brown, smaller sporangia, and smaller spores, those in *C. vernicosus* being \( \frac{1}{3} \) of an inch long.

463. *Aschersonia oxystoma*, n. s.; stromate basi floccoso-expanso leviter cylindrico ceraceo armeniaco, centro depresso; sporis oblongis utrinque appendiculatis.

Hab. On the under side of green leaves of some *Myrsineae*. Lower part of India. (Hooker and Thomson.)

Stroma 1 line across, waxy, apricot-coloured, expanded and floccose at the base, above cylindrical, with one or more depressions at the apex; cells irregular, few, large. Spores \( \frac{1}{3} \) of an inch long, oblong or elliptic, with a filiform appendage at either end.

Resembling in colour *A. Taitensis*, Mont., but very different in form and in the spores. There is a closely allied species in Ceylon.

464. *Uredo Clematidis*, n. s.; maculis obsoletis; sari sparsis irregularibus epidermide persistente vestitis; sporis magnis granulato-pallidis.

Hab. On the under side of the leaves of species of *Clematis nutans*. Paras Nath. (Dr. Hooker.)

Spots obsolete. Sori scattered over the under surface of the leaves, irregular, covered for a long time with the cuticle. Spores minutely rough with raised granules, yellow, becoming pale, \( \frac{1}{3} \) of an inch long, subglobose, rather irregular.

This species seems constantly mixed with a *Puccinia*, which sometimes occupies almost the whole sora.

* Coleosporium pingue*, Lév.

Hab. On the leaves and petioles of a species of *Astillae*. Surureen, June 26, 1850. (Dr. Hooker.)


Hab. On pods of *Acacia*. Abundant in the Dunway Pass, Behar. On pods and stems of *Abrus*. Paras Nath. (Dr. Hooker.)

Sori \( \frac{1}{3} \) of an inch or more across, surrounded by the laciniated cuticle; the mycelium penetrating the substance of the pods, and producing
a crop of spores on the opposite side. Spores $\frac{1}{8}$ of an inch across; vesicular appendages large, distinct, elongated; peduncle long, hyaline, flexuous.

This is distinguished from R. glandulosa, which occurs on several species of Tephrosia, in South Carolina, by the long slender peduncles and the distinct vesicles. It is most gratifying to have this confirmation of a very beautiful genus.

* Ustilago Carbo, Tul.

HAB. On Cymbopogon, Khasia. (Hooker and Thomson.)

Spores of an inch in diameter, resembling those of the form from New Zealand, figured by Tulasne. There is, however, the ordinary form on Barley from the Soane River, and also one extremely like Tilletia Sorghi, Tul., on Saccharum, from the same locality, both of which I regard as simple forms of the common Smut.

466. U. bursa, n. s.; sporis ellipticis crassiusculis fuligineo-atris minute verrucoso-echinatis.

HAB. On the ovaries of Anthistiria arundinacea, Sikkim. (Dr. Hooker.)

Forming a greenish bag about 2 lines long, greatly bulging externally, and tipped with the hard shining horny remains of the integuments and style, frequently with a strong lateral fissure. Spores elliptic, $\frac{1}{2}$ of an inch long, rather thick, olive-black.

Differing from U. Maydis in its elliptic spores. The habit is just that of the common Bunt, but I can detect no unpleasant smell.


HAB. On the germens of some Oplismenoid grass, near the summit of Paras Nath, 4000 feet. (Dr. Hooker.)

Occupying the base of the germen, which is elongated above into a long strap-shaped lamina, which is tipped occasionally with the withered remains of the stigma. Spores subglobose, at first hyaline and often pedunculate, $\frac{1}{2}$ of an inch in diameter, even, at length brown.

A very singular species, having at first the appearance of an Ergot. The dark spores are however present at the base of the elongated villous appendage, which seem to arise from the germen. M. Tulasne suggests that it may eventually prove congeneric with Tilletia Sorghi, which is scarcely a good Tilletia.
DECADES OF FUNGI.

207


HAB. Infesting the fruit of Carex baccata or some allied species. Khasia. (Hooker and Thomson.) Tambur river, East Nepal. Nov. 20. (Dr. Hooker.)

The spores in the Khasia specimens are much smaller than in those of Ceylon and New Zealand, but the species appears to be the same. Spores in Khasia specimens, when subglobose about $\frac{1}{300}$ of an inch in diameter, when elongated about $\frac{1}{300}$; in the Ceylon specimens they vary from $\frac{1}{200}$ to $\frac{1}{300}$, and the same is the case with those from New Zealand.

* U. Emodensis, Berk.

HAB. Sikkim, 6000 feet. Nangki, East Nepal, 10,000 feet. (Dr. Hooker.)

Better specimens of this species show that the curious swollen bodies are really excrescences, immediately arising from the stem, and not from any transformation of the inflorescence. The spores are $\frac{1}{400}$ of an inch long.

468. U. ocrearum, n. s.; ocreas in laminas petaliformes deformans; sporis subovatis irregularibus lilacinis levibus, floccis nullis immixtis.

HAB. On the ocreæ of Polygonum. Nangki, East Nepal, 10,000 feet. (Dr. Hooker.)

Changing the ocreæ into purple petaliform spatulate expansions. Spores subovate, irregular, variable, $\frac{1}{300}$ of an inch long, even, thin, without any flocci.

This very curious production is doubtless allied to U. Emodensis, but it does not occur on the same species of Polygonum; the habit is different, and the spores on the average are larger, flatter, and more irregular.

* Uromyces apiculosa, Lév.

HAB. On Mulgedium Tataricum. Nubra valley, Tibet, July 28, 1848. (Dr. Thomson.)

* Ecidium Thomsoni, Berk. in Gard. Chron. 1852, p. 627, cum icono.

On the leaves of Abies Smithiana. North-western Himalayas, 8000 feet. (Thomson.) Sikkim, 9000. (Hooker and Thomson.)

* E. Tragopogonis, Pers.

HAB. With Uromyces apiculosa.

469. Puccinia ustalis, n. s.; hypophylla, maculis pallidis; soris mag-
nis suborbicularibus depressis fuscis margine obscuro obscurem quasi inus-
tis; sporis elongatis pallido-fuscis, stipite brevi.

**HAB.** On the underside of the leaves of some species of *Ranunculus pulchellus*. Momay Samdong, 15,500 feet. (Dr. Hooker.)

Hypophyllous. Spots pale on either side of the leaf. Sori large, a line or more broad, scattered without any order, depressed, brown, with the edge deeper. Spores pale brown, elongated, oblong, attenuated above, but ending obtusely, often oblique; peduncle rather short.

A very distinct species, remarkable for the large size of its depressed sori.

470. *P. insidiosa*, n. s.; sporis elongatis clavatis apiculo obtuso præditis; episporio crasso; pedunculis longis hyalinis flexuosis.

**HAB.** Nestling among the spores of *Uredo Clematidis*. Paras Nath. (Dr. Hooker.)

Spores oblongo-clavate, terminated by a little obtuse papilla; episo-

* Plasm de Puccinia is merely a state of the *Uredo*. Instances occur of two species of *Puccinia* growing in the same sorus.

* *Stilbum lateritium*, Berk.

**HAB.** Eastern Nepal. On bark. (Dr. Hooker.)

471. *Cladosporium scopaeforme*, n. s.; cæspitulis parvis orbicularibus; floccis erectis simplicibus nodosis; sporis clavatis elongatis curvis sub-

* Helicocoryne*. If the spores were septate, it would come very near to Corda’s genus *Helicocoryne*.

* C. congestum*, n. s.; cæspitulis parvis orbicularibus, floccis erectis simplicibus, sporis brevioribus clavatis curvis subhyalinis.

**HAB.** On the under side of the leaves of *Litsea*. Ceylon. (G. H. K. Thwaites.)

Spores not exceeding of an inch. Thread even, not nodulose. Closely allied, but distinct.
Sclerographium, n. g.—Flocci dense fasciculati, apice liberi. Spore oblongae, celluloso-septatae.—Fungi filiformes epiphyti, Graphio sporis multisectatis diversi, Mystrosporio analogi.

472. Sclerographium aterrimum, n. s.
Hab. On the under side of the leaves of some species of Indigofera, probably I. atropurpurea. India.

Scattered over the under side of the leaves in the form of little jet-black threads, scarcely ½ a line high, which at first sight seem to be part of the matrix. Flocci densely fasciculate, somewhat free at the very base and at the apex. Spores oblong or clavate, very dark, transversely multisectate, with a few vertical divisions about ½ of an inch long.

This pretty little fungus differs from Mystrosporium in the fasciculate threads, and from Graphium in the large compound spores. (Tab. VIII. fig. 4.)

* Geoglossum viride, Pers.
Hab. On the ground. Yeumtong, 12,000 feet. Sept. 5, 1849. Lachoong, 3000 feet. (Dr. Hooker.)

Specimens slender. Sporidia oblong, often subclavate or slightly curved, ½ of an inch long, as in Mougeot and Nestler, no. 994. In the Lachoong specimens, which are very dark, the sporidia are about 14 of an inch long.

* G. glabrum, P.
Hab. On the ground. Yeumtong, 13,000 feet. Sept. 6, 1849. (Dr. Hooker.)

473. Rhizina zonata, Berk.; orbicularis, demum irregularis, spadicea, margine obtuso; subtus zonata, spongiosa, arrhiza.
Hab. Amongst pine-leaves. Darjeeling. (Dr. Hooker.)

At first orbicular, but becoming at length lobed and irregular, clothed beneath with a dense spongy coat, consisting of red-brown flocci, without any separate rooting fascicles, distinctly and repeatedly zoned; margin obtuse, sometimes slightly reflected. Hymenium even, dark brown. Paraphyses slender; sporidia subelliptic, abruptly pointed at either end, 3 of an inch long, containing two nuclei, nearly colourless.

A very curious and distinct species, calling to mind Phlebia reflexa. There is no trace of distinct rooting fascicles, but in old specimens the under coat often becomes cracked.
474. *Peziza aeruginea*, n. s.; cupulis cyathiformibus subregularibus, extus aerugineo-obscurs, intus pallidioribus; mycelio lignum superficialiter tingente; sporidiis subfusiformibus majoribus.

On dead wood. Khasia. (Hooker and Thomson.)

Cups about 1 line across, scattered over the surface of the wood, which is strongly but not deeply tinged with green; nearly regular; dark metallic-green externally. Stem about as high as the cups, attenuated downwards, dark green. Hymenium paler; ascii linear; sporidia subfusiform, \( \frac{1}{3} \) of an inch long.

This is closely allied to *P. aeruginosa*, but not only are the cups more regular and smaller, and the tint darker, and the wood stained more superficially, but the sporidia are half as long again as those of that species, with a proportional increase of width. The sporidia in *P. aeruginosa* are about \( \frac{1}{3} \) of an inch long.

475. *Rhytisma piceum*, n. s.; orbiculare sublobatum opacum piceum centro depressum rugosum; margine levii.

On living leaves of *Pieris*. Tambur Valley, E. Nepal. (Dr. Hooker.)

Orbiculare, 5–6 lines broad, opaque, very thin at the extreme edge, where it is more or less lobed, then slightly swollen, depressed and rugose in the centre. In less perfect individuals the patches are broken up, and the natural order disarranged.

Most resembling *R. decolorans*, Schwein. Unfortunately the fruit is not perfect.

* Phacidium ceuthocarpa*, Fr.

Hab. On large poplar-leaves (*Populus ciliata*). Khabili river. 6000 feet. (Dr. Hooker.)

This is no *Sphaeria*, but more properly a *Phacidium*. The specimens are unfortunately old, but they show a distinct naked disc, with oblong, minute, subclavate spores, like those so common in some *Peziza*, which I have not seen in the published specimens, in which however there is not a trace of perithecia.

476. *Asterina aspersa*, n. s.; subiculo tenuissimo, margine subradiante; ascii sporidiisque oblongis.

Hab. On the under side of the leaves of some species of *Laurus*. Khasia. (Dr. Hooker.)

Spots having exactly the appearance of being formed by drops of dirty water dashed upon the leaves, distinct, black, extremely thin, somewhat radiating towards the margin. Perithecia punctiform, opening with a minute, round ostiolum. Ascii and sporidia oblong.
Most resembling a MS. species from Ceylon, *A. unbecula*, in which the spots are scarcely visible. I have not seen the sporidia bipartite, as in that species, but they doubtless become so at last.

477. *A. cineta*, n. s.; maculis fibrillosis; fibrillis sparsis ramosis repentibus; peritheciis globosis, setis acutis cinctis; ascis oblongis.

**Hab.** On leaves of *Camellia*. Khasia. (Hooker and Thomson.)

Spots one or two lines broad on either side of the leaf, consisting of distinct, creeping, branched fibres, which resemble some minute *Polysiphonia*. Perithecia globose, surrounded by sharp bristles, about as long as themselves. Asci short, linear-oblong; sporidia delicate, sub-elliptic, but slightly attenuated, uniseptate, hyaline (at least in the specimens examined), about \( \frac{1}{2} \) of an inch long.

This species in some measure connects the genera *Asterina* and *Meliola*. The asci did not very readily part with their contents, and were possibly not mature.

478. *A. scutellifera*, n. s.; mycelio tenuissimo pelliculo reticulato; peritheciis scutelliformibus, immixtis alis punctiformibus.

**Hab.** On living leaves of *Antidesma*. Chittagong. (Hooker and Thomson.)

Patches irregular, extremely thin, peeling off when wetted, consisting of reticulate fibres, marked with little scutelliform perithecia, in which I have not seen perfect fruit. Scattered over the mycelium are other punctiform perithecia, which contain numerous minute, oblong, curved, hyaline spores, \( \frac{1}{4} \) of an inch long.

Though the scutelliform perithecia are still in a sclerotioid state, I think this production too singular to pass over, on account of the second form of fruit on the same mycelium. The species will not be difficult to recognize on account of its extremely thin patches, forming a mere dark cloud, and the scutelliform fruit with which they are spotted. There seems to be frequently a small ostiolum.

479. *Cordyceps falcata*, n. s.; cespitosa, basi processibus acutis filiformibus immixta; stipitibus cylindricis subito in capitulum falciforme acuminatum incrassatis.

**Hab.** On a dead caterpillar. Myrong. (Hooker and Thomson.)

Cespitose; fertile stems \( \frac{1}{4} \) inch high, about 1 line thick, two or three together, with a quantity of sterile, filiform, acute, abortive processes at the base, cylindrical, swelling gradually into an oblique, falciform, acuminate head, which is rough with the oblong, free, pointed perithecia. Asci filiform, with an inflated appendage at the tip.
This differs from all known species in the caespitose falcate heads, which are naked at the base on the convex side. The sporidia are not yet formed, so that I cannot compare them with those of other species. (Tab. VIII. fig. 2.)

480. *C. racemosa*, n. s.; stipite cylindrico nigro, capitulo ovato proli
ero.

HAB. On a dead caterpillar. Myriong. (Hooker and Thomson.)

Stem nearly two inches high, soiled below with fragments of earth, above very dark, smooth, swollen at the top into a little ovate head, which is covered with short processes, each tipped with an ovate knob. The fructification is not formed at present in the only specimen, which evidently grows from a different and smaller caterpillar than the last, and the stem is very different, so that it can be no form of that species. The fructification is unfortunately imperfect. But for its place of growth it might easily be passed over as an imperfect *Balanoi
dera*. (Tab. VIII. fig. 3.)

* Xylaria Hypoxylon (Ehr.).

HAB. Soane River. (Dr. Hooker.)

(To be continued.)

Report of a Journey of Discovery into the Interior of Western Australia, between 8th September, 1848, and 3rd February, 1849; by J. S. Roe, Esq., Surveyor-General.

(Continued from p. 180.)

Being desirous of searching as soon as possible for the coal which our native had heard existed further to the westward, and in a position so favourable as to admit of its being readily embarked in a boat, I proceeded previously to ascend the Phillips, and to examine the good country we had seen in its several valleys on the 21st. Here we found much good grassy land in the vicinity of the river and of its numerous branches and tributaries, the greater number of which came from Mount Short and the Ravensthorpe Hills, and were mostly fresh, though sometimes brackish. Following that branch which led us most to the westward, at the end of twenty-eight miles it had ceased to be worth following, and we proceeded south-westward over generally a poor country, but intersected by many small hollows and watercourses, con-