Some Fungi from Tibet.

BY

MALCOLM WILSON, D.Sc., F.L.S., F.R.S.E.,

Lecturer in Mycology in the University of Edinburgh.

With Plate CLXIX.

THE fungi described below were found on plants collected by Mr G. Forrest during July 1917 on the Mekong-Salween divide, in Tibet.

Aecidium sino-rhododendri, n. sp.

Maculis nullis. Aecidiis hypophyllis irregulariter dispositis, gregariis raro solitariis, pseudoperidiis cupulatis, albido-flavis circiter .5 mm. diam., breve cylindricis demum late apertis, margine lacero-dentato revoluto, aecidiosporis ellipticis, episporio dense verruculosis, 27–37μ × 20–25μ.

Hab. in foliis vivis *Rhododendri calvescentis,* Balf. f. et Forrest,* in S.E. Tibet. G. Forrest. No. 14,331. July 1917.

In the dried specimens the rather large white aecidia are very conspicuous on the brownish leaf (figs. 1 and 2, Plate CLXIX). A portion of the wall of the aecidiospore is smooth and thinner than the remainder (fig. 3). No spermogonia were found in the specimens.

With the exception of *Puccinia Rhododendri,* Fuck., a species with teleutospores only, occurring on *Rhododendron ferrugineum,* no species of *Puccinia* or *Uromyces* have been recorded on Rhododendrons. There is no information available regarding the other spore forms of *Aecidium sino-rhododendri.*

Labridium Rhododendri, n. sp.

Maculis epiphyllis griseis, orbiculo rufo-brunneo circumdatis, 1.5–3 mm. diam. Peritheciis gregariis vel sparsis, saepe confluentibus irregularibusque plerumque ellipsoideo-oblongis vel fusoideis, hysterioideis, rima longitudinali aperta, dimidiatis, .4–.9 mm. longis .3–.7 mm. latis, membranaceo-carbonaceis, textura solidiuscula, parenchymatica, subimpellucida, atro-

* "New Species of Rhododendron," Prof. Bayley Balfour, Notes from the Royal Botanic Garden, Edinburgh, No. 52–53, vol. xi (1919), p. 29.

fusca; sporulis oblongis, inaequilateralibus vel subcurvulis, 3-septatis, raro 4–5-septatis, ad septa paullo constrictis, castaneo-brunneis, ad apicem basemque cilio hyalino ad 35μ longo praeditis, 23–26μ × 7–8μ (sine ciliis) loculis ultimis minoribus; sporophoris simplicibus longitudine variabilis (ad 40μ), hyalinis, continuis.

Hab. in foliis vivis *Rhododendri calvescentis*, Balf. f. et Forrest,* in S.E. Tibet. G. Forrest. No. 14,331. July 1917.

The greyish-brown patches produced by this species on the upper surface of the leaf are directly opposite the groups of aecidia of *Aecidium sino-rhododendri* on the lower surface, and it appears possible that *Labridium Rhododendri* can only infect the leaf where the resistance of the tissues has been lowered by the presence of the *Aecidium*.

Only one other species of *Labridium* is known, *L. hians*, described by Vestergren in Sweden on *Potentilla reptans*.†

In the present species many of the pycnidia are irregular in form and partly confluent (fig. 4), but other simple types occur (B′, fig. 4) which resemble those of *L. hians* described by Vestergren. The dehiscence by a slit-like opening is very marked (fig. 5), the lips opening when moist and closing when dried. The spores are considerably larger than those of *L. hians*, but are similar in form (fig. 6). In view of the close agreement in spore form, the irregularity of many of the fructifications cannot be considered a character of sufficient importance to justify the exclusion of this species from the genus *Labridium*.

Puccinia Festucae, Plowr. Aecidia and spermogonia on *Lonicera Myrtillus*, Hook. f. et Thoms. var. On Ka-gwr-pw, Mekong-Salween divide. Lat. 28° 25′ N., alt. 14,000 feet. No. 14,419. G. Forrest. July 1917.

The species has not been previously recorded on this host.

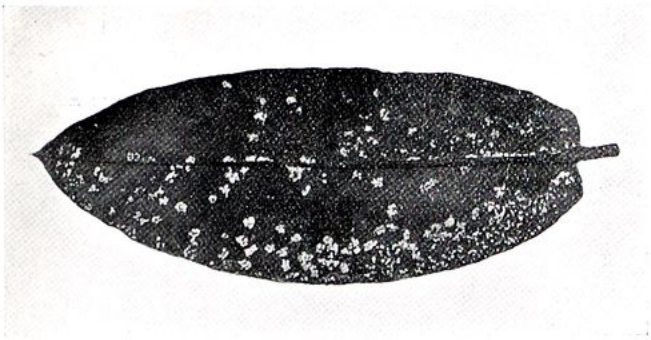
Epichloe sclerotica, Pat. On a grass, probably *Andropogon* sp. Hills around Tengyueh, Yunnan. Lat. 25° N., alt. 5300–6000 feet. No. 18,549. G. Forrest. Oct. 1919.

First recorded by Patouillard ‡ from Fac-Bin, Tonkin. As all the inflorescences are attacked and flower development prevented, exact identification of the host species is impossible. All the glumes are enclosed by a hard black stroma which closely simulates *Claviceps purpurea* in appearance.

* *Loc. cit.*

† Oefv. K. Vet. Acad. Förh., No. 1 (1897), p. 43.

‡ "Contributions à la Flore mycologique du Tonkin," Journ. de botanique, iv (1890), p. 65.



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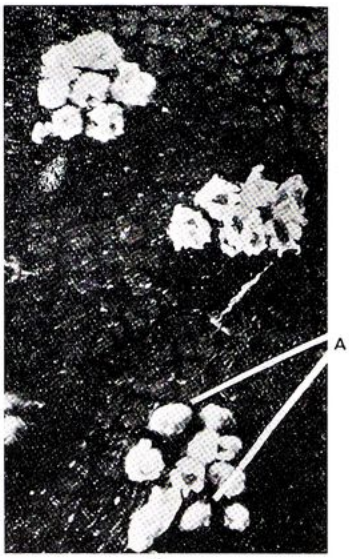

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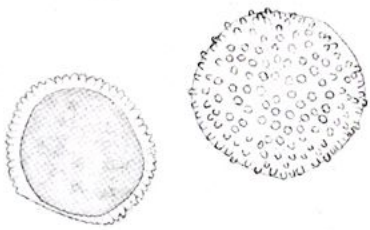

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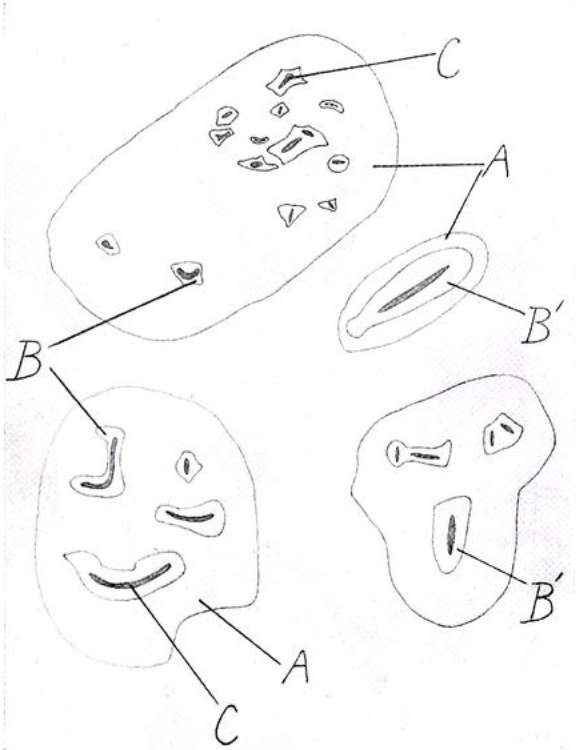

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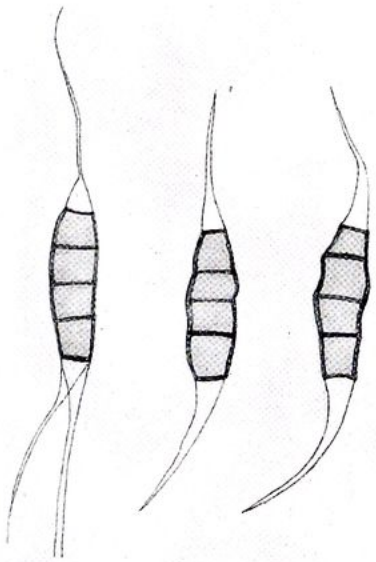

6.

EXPLANATION OF PLATE CLXIX.

Illustrating Dr. Wilson's paper on Some Fungi from Tibet.

FIG. 1.—Leaf of *Rhododendron calvescens* with aecidia of *Aecidium sino-rhododendri*. Natural size.

FIG. 2.—Groups of aecidia on leaf of *Rh. calvescens*. A, young unopened aecidia. × about 10.

FIG. 3.—Aecidiospores of *Aecidium sino-rhododendri*. × 495.

FIG. 4.—Plan of maculae and pycnidia of *Labridium Rhododendri* showing opening slits (shaded). A, macula; B, B′, pycnidia; C, slit. × about 15.

FIG. 5.—Transverse section of leaf of *Rh. calvescens* with pycnidium of *Labridium Rhododendri* showing dehiscence. × 125.

FIG. 6.—Spores of *Labridium Rhododendri*, the one on the left still attached to sporophore. × about 600.