

Studies on Rocky Mountain Fungi II A new Species of *Leptothyrium* on *Elymus**

By W. G. Solheim.

Leptothyrium petrakii sp. nov.

Maculis amphigenis, elongatis, 0.5—2 \Rightarrow 0.5—0.75 mm., nervulis limitatis, interdum confluentibus, stramineis vel brunneis, margine indefinitis; pycnidiiis numerosis, epiphyllis, inter nervulos seriatim ordinatis, sub stomatibus immersis, non erumpentibus, dimidiatis, ambitu ellipticis vel irregularibus, ad latera saepe contractis, 121—243 \Rightarrow 70—138 μ , atro-brunneis, cellulis externis radiantibus, ostiolo elongato, 21—24 \Rightarrow 8—14 μ ; conidiophoris simplicibus, hyalinis, plerumque 16 \Rightarrow 3 μ ; conidiis bacilliformibus, hyalinis, 3.5—10 \Rightarrow 1—1.5 μ , rectis vel leniter curvatis.

Specimen typicum in foliis vivis vel languidis *Elymi cinerei* Scribn. (*Gramineae*), Wheatland Cutoff, Laramie Mountains, Albany County, Wyoming, Amer. Bor., 4 Octobri, 1952, legit W. G. Solheim, sub numero 3427.

Spots amphigenous, elongate, 0.5—2 \Rightarrow 0.5—0.75 mm., vein-limited, at times coalescing, straw colored to brown, border indefinite; pycnidia fairly abundant, epiphyllous, arranged in rows in vein-limited sectors of spot, substomatal, immersed, not erumpent, dimidiate, elliptical to irregular in outline, frequently constricted laterally, 121—243 \Rightarrow 70—138 μ , dark brown, external cells radiately arranged, ostiole elongate, 21—24 \Rightarrow 8—14 μ ; conidiophores simple, hyaline, about 16 \Rightarrow 3 μ ; conidia bacilliform, hyaline 3.5—10 \Rightarrow 1—1.5 μ straight or slightly curved.

On living and browning portions of living leaves of *Elymus cinereus* Scribn. Wheatland Cutoff, Laramie Mountains, Albany County, Wyoming. October 4, 1952. Altitude 6,500 feet. W. G. Solheim, 3427 (type). The type will be distributed in the author's set, Mycoflora Saximontanensis Exsiccata, Centuria VII.

At least ten species of *Leptothyrium* have previously been described on various genera and species of *Gramineae*. Whether or not these are all valid has not been determined. The new species, however,

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appears to be distinct. A comparison of the described species is given in Table 1.

The author is most happy to dedicate the new species to Dr. F. Petrak in recognition of his great attainments in the field of mycology and also in pleasant memory of his visit to Wyoming and to the author at the time of the Foray of the Mycological Society of America in 1950.

Table 1. Comparison of *Leptothyrium* species on *Gramineae*.

| Species and Host Genus | Pycnidia | Conidia |
|--|------------------------|---|
| <i>phragmitis</i> Died. On <i>Phragmites</i> | 150—200 | 4—5 \approx 1 oblong |
| <i>angelae</i> Sacc. On <i>Bambusa</i> | 250—500 | 7—8 \approx 1 fusoid |
| <i>petrakii</i> Solh. On <i>Elymus</i> | 121—243 70—138 | 3.5—10 \approx 1—1.5 bacilliform |
| <i>culmigenum</i> Sacc. & Brun. On <i>Bambusa</i> | | 3 \approx 1.5 ovate-oblong |
| <i>pamparum</i> Speg. On <i>Panicum</i> | 3000—4000 1500—3000 | 5—6 \approx 1.5—2 elliptic-ovate to subbotuliform |
| <i>crastophilum</i> Bomm. On <i>Calamagrostis</i> | 210—250 | 9—10 \approx 2 cylindrical |
| <i>cylindricum</i> Aik. On <i>Arundinaria</i> | 300—400 | 18—25 \approx 3.5—4 cylindrical |
| <i>avenae</i> Tehon On <i>Avena</i> | 100—200 65—140 | 16—23 \approx 4—8.5 oval, oblong or pediform |
| <i>spartinae</i> Peck *) On <i>Spartina</i> | minute | 12—15 \approx 5—7 |
| <i>zeae</i> Stout On <i>Zea</i> | 55—225 | 8.5—13.5 irregularly globose |

*) = *Tracylla spartinae* (Sacc.) Tassi; cfr. Petrak in Sydowia I. p. 202 (1947).

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Autor(en)/Author(s): Solheim W. G.

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