The following initiates a series of limited observations on miscellaneous mycological topics.

1. *Cristulariella*: Yokoyama and Tubaki (1974) presented a report on *Cristulariella pyramidalis* Waterman & Marshall from the Orient shortly before my report on the genus from North America and Europe (Redhead, 1975). They considered two names to be earlier synonyms of *C. pyramidalis*, but rejected their use because they were "nomen seminudum." In fact this term has no legal standing under the International Code of Botanical Nomenclature (Stafleu et al., 1978). These names were published prior to 1935 and therefore do not require Latin descriptions (Art. 36) and it is of no consequence that they were described in Japanese. Therefore, they are available for use as is discussed below.

Hino (1929) published the new names *Sclerotinia moricola* Hino and *Botrytis moricola* Hino based on a single type collection. The name *Sclerotinia moricola* was to serve as the name for the whole fungus (the holomorph) and *Botrytis moricola* was to serve as the easily disseminated anamorph. Since this was prior to the 1953 deadline (Art. 34) for simultaneously published names, both were validly published. However, Hino did not describe or illustrate the "perfect state" (teleomorph) and none could be found on the type collection (Sawada, 1933; Yokoyama and Tubaki, 1974). Accordingly Hino's new name in the "perfect" genus *Sclerotinia* must be declared illegitimate (Art. 59). Similarly the new combination *Botryotinia moricola* (Hino) Yamamota (1959) in another "perfect" genus and based on *Sclerotinia moricola* is invalid (Art. 59).

Sawada (1933) validly and legitimately published the new name *Sclerotium cinnamomii* Sawada, based on propagules and sclerotia on diseased leaves, both being anamorphs. The name *Sclerotium* is normally applied to a sclerotium state and its application should be restricted to that state present in Sawada's material. The propagules were not separately described but were equated with *Botrytis moricola*.

There is no doubt after examining the excellent illustrations by Hino
and Sawada that they were dealing with the same fungus for which Waterman and Marshall (1947) published the name *Cristulariella pyramidalis* with the propagules as the type state. *Botrytis moricola* Hino is therefore the earliest validly and legitimately published name for the propagules and should be transferred to the genus *Cristulariella*.


*Sclerotium cinnamomi* Sawada is the correct name for the sclerotial state of this fungus.

2. *Valdensinia*: *Valdensinia heterodoxa* Peyr. was previously known only from British Columbia in North America, and from Europe (Redhead, 1974; Redhead and Perrin, 1972a, 1972b). The anamorphic state *Valdensia heterodoxa* Peyr. has been discovered on leaf spots of three new hosts for North America in Quebec, approximately 2100 miles [3360 km] east of the previously known sites. The most heavily infected species was *Vaccinium myrtillus* Michx. Less extensive infections were present on adjacent individuals of *V. angustifolium* Ait. and *Diervilla lonicera* Mill.

Collections examined: Canada: Quebec: Réserve Chibougamau, Lac Nicabau, Aug. 23, 1976, S. A. Redhead 2004 (DAOM 160727); 2224 (DAOM 160729); 73.6 km N.E. of Chibougamau on Hwy. 167, Aug. 16, 1976, S. A. R. 2222 (DAOM 160728); 2223 (DAOM 160730).

3. *Neolecta*: Redhead (1977) described collections of *Neolecta irregularis* (Pk.) Korf & Rogers and *N. vitellina* (Bres.) Korf & Rogers from Canada. The only species I recognized from western Canada was *N. vitellina* and as a result doubt was raised concerning the identity of collections reported as *Spragueola irregularis* (Pk.) Nannfeldt from the western United States by Mains (1955). During a recent trip to Ann Arbor, Michigan, collections identified as *Spragueola irregularis* by Mains and additional collections were examined with the following results.

*Neolecta irregularis*

Neolecta vitellina


Neolecta vitellina


These additional collections support my earlier prediction that the western collections were most likely Neolecta vitellina. Neolecta irreg-
Figs. 1-3. Neolecta vitellina and rootlets stained by cotton blue in lactic acid and mounted in Hoyer's media. 1. Cross section of rootlet at infection site. 2. Longitudinal section of infected rootlet tip. 3. Disrupted stele elements embedded in fungus tissue. Bars approximately 10 µm.
ularis now appears to be a disjunct species restricted to Japan (Imai, 1941) and eastern North America.

The genus Neolecta is of further interest because of the discovery of its parasitic life style. Ascomes from S.A.R. 1926 (TRTC) cited in Redhead (1977) were noted to be attached to one rootlet each. Some of these ascomes were preserved in 90% ETOH. Cross and longitudinal sections of the rootlets with attached ascomes showed (Figs. 1–3) that in each case the ascomes originated from a dense mass of erumpent hyphae formed in the stele of the rootlet.

The base is a sclerotiumlike mass, up to 230 μm in diam, of hyphae which displaces most of the host's stele. This mass protrudes from a split on one side of the rootlet. Its hyphae are 3.5–8 μm in diam, hyaline, smooth, densely interwoven and with slightly thickened walls. The outermost hyphae of the mass have faintly tinted gray-brown walls. The exposed surface of the mass is almost obscured by prominently radiating hyphae which give rise to a large mass of loosely interwoven hyphae. These hyphae are 4.5–5.5 μm in diam, noninflated, hyaline, smooth, frequently branched and septate. This is the mass of mycelium which gives rise to the ascome.

The sclerotiumlike mass is limited to a few hundred micrometers of the stele where it disrupts the cellular organization and crushes xylem elements. The hyphae of Neolecta vitellina do not appear to ramify in the host. Each of the infected rootlets had, in addition to Neolecta, at least one mycorrhizal associate, possibly Cenococcum, which formed a distinct sheath around the root. Neolecta ascomes ruptured this sheath also.

No other fungal root parasite is known to grow in this manner. The lack of a mycelium in the soil and the very limited sclerotiumlike mass in the host stele are additional characters which isolate the Neolectaceae from other families of fungi.

Roesleria hypogea Thüm. & Pass. sporulates in subterranean areas on roots of angiosperms but differs in not producing a massive sclerotiumlike body in the stele of the host and by not forcefully discharging its ascospores (Beckwith, 1924; Bayliss-Elliott and Grove, 1916).

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LITERATURE CITED

ASCUS AND ASCOSPORE DEVELOPMENT IN ELEUTHERASCUS PERUVIANUS. I.
MORPHOLOGY AND ORIENTATION OF THE ASCOSPORES

W. L. Steffens and J. P. Jones

Department of Plant Pathology and Crop Physiology, Louisiana State University Agricultural Experiment Station, Baton Rouge, Louisiana 70803

The events leading to ascus and ascocarp formation of Eleutherascus peruvianus Huang have been described by Huang (1975). Croziers, formed from short ascogenous hyphae produced by the intertwining of two short hyphal branches, swell into globose or subglobose asci, averaging 30 to 40 μm in diam. Ascocarps consist of one or two asci and