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Noteworthy Iowa Fungi

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NOTEWORTHY IOWA FUNGI

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During the summer of 1929 a number of collections were made of parasitic fungi which for one reason or another should be made a matter of record. The following notes concern 17 species of which 4 appear to be new to the state. Of the hosts, 20 in number, ten are new. The fungi are listed in systematic sequence. The numbers in parenthesis following the names refer to the number of the species in Gilman and Archer.[1] The host and locality are then given, with such notes as the specimens warrant.

SYNCHYTRIUM HOLWAYI Farl. (833).
On *Monarda mollis* L., Moore, Poweshiek co., July 10, 1930.

Described from material collected by Holway at Decorah. The only other previous record from the state was a very copious collection made by the writer at Fayette in 1909. While the material was not over abundant at Moore the indications were that the fungus would increase as the season advanced.

BREMIA LACTUCAE Regel. (54).
On *Lactuca scariola* L., Oskaloosa, June 16.

This mildew is common and often destructive on the cultivated lettuce (*L. sativa*) and is not uncommon on the native species of the genus. A very severe infection was found in a large patch of the host. The only previous record that the writer has noted in which this host was included is in publications from the State College in which the host is recorded as *L. scariola* var. *integrata*. As the mildew was collected only on the lower entire leaves and never on the upper lobed ones, perhaps this reference should be made to the variety of the host instead of to the species.

PERONOSPORA CLAYTONIAE Farlow (——).
On *Claytonia virginica* L., Moore, May 25.

A scanty collection of this rare species was made on host plants that had matured their seeds, and were badly infected with rust. The fungus was described from Lexington, Ky., where it was col-

1 Gilman, J. C. and Archer, W. A. The Fungi of Iowa Parasitic on Plants. Iowa State Col. Jour. Sci. vol 3, pp. 299-507. 1929.

lected by Dr. Kellerman. The only other records which have been seen are from Ontario and California.

PERONOSPORA FICARIAE Tul. (410).
On *Ranunculus septentrionalis* Poir, Moore, May 25.

Rather a rare species in Iowa. It has been previously collected at Decorah and Iowa City on this host. The only other Iowa collection which has come to the writer's notice is one which he made some years since at Fayette on *R. fascicularis* Muhl.

PERONOSPORA HYDROPHYLLI Waite (412).
On *Elisia Nyctiles* L., Oskaloosa, May 16.

Common in Iowa on *Hydrophyllum virginicum*. What is apparently the same species is recorded by Gilman and Archer (p. 366) as having been collected at Ames by Melhus in 1924. They note the host as new in literature. The writer collected this mildew in abundance at Iowa City in 1915-16 and has seen specimens from Kansas.

PERONOSPORA PLANTAGINIS Underw. (——).
On *Plantago aristata* Michx, Oskaloosa, July 7.

This is a very different species from *P. alata* Fuckel, which is common on *Plantago major* and *P. Rugelii*. It was first described by Underwood from Alabama. The writer has since collected it in both Carolinas, in Kansas, and in Indiana. This collection, which is apparently the first in Iowa, extends its range considerably to the northward.

EPICHLOE TYPHINA (Pers.) Trel. (245).
On *Glyceria nervata* Trin., Oskaloosa, June 19.

This interesting fungus was collected in great abundance on what appears to be a new host for Iowa. The host was determined by S. M. Dietz.

SEPTORIA COREOPSIDIS J. J. Davis. (——).
On *Coreopsis tripteris* L., Oskaloosa, July 7.

Rather abundant on a small clump of the host. Apparently new to Iowa. This species was determined by Dr. Joseph C. Gilman.

TUBERCULINA PERSICINA (Ditm.) Sacc. (845).
On *Aecidium Onobrychidis* Burrill on *Apios tuberosa* Moench, Oskaloosa, July 7.

Most collectors and students have failed to note the presence of the various parasites which they have found on the rusts, hence the list of hosts and collections is almost neglible.

KUEHNEOLOA UREDINIS (Link) Arthur (454).
On *Rubus procumbens* Muhl., Moore, 10 July.

Apparently a new host for the state as the only collection listed is from Decorah on *R. allegheniensis* Port., collected by Holway in 1882.[2] The pale form on leaves, as well as the very conspicuous orange sori of the caulicolous *Uredo Muelleri* were abundant on one clump of the host.

PUCCINIA GRAMINIS Pers. (593).
I on *Berberis vulgaris* L., May 25, July 10, Moore.

Perhaps it might be considered strange that this rust should be included in a list of noteworthy fungi. In May a small bush of barberry was seen in the woods, badly infested with aecia. The same bush was visited on July 10th and was still producing aeciospores, although wheat harvest was in full progress.

PUCCINIA CLEMATIDIS (DC.) Lagerh. (575)
On *Anemonella thalictroides* (L.) Spach, Moore, May 25.

Previously recorded from Iowa on this host from Decatur County, and from Eldora. The collection was abundant. The aecia of this species was also collected the same day on an unidentified *Clematis*, probably a purple flowered member of the *Viorna* group. The host clump was not visited later in the season to obtain flowers.

PUCCINIA MENTHAE Pers. (613)
On *Pycnanthemum flexuosum* (Walt.) BSP., Oskaloosa, July 7.

This host is apparently new to the state. The infection was abundant.

PUCCINIA SAMBUCI (Schw.) Arth. (637)
On *Sambucus canadensis* L., Moore, May 25.

A small collection of this aecium was made, apparently an early infection. A few days later infected spots were seen from the roadside north of Eddyville, but no collections were made. Dr. Arthur [3] says that "*Aecidium Sambuci* on *Sambucus canadensis* probably occurs occasionally in southeastern Iowa, although the writer cannot learn of any specimen preserved in the state or elsewhere." Gilman and Archer [4] note a specimen in the Herbarium of the U. S. Department of Agriculture which was collected by Hitchcock at Iowa City in 1889.

2 Arthur, Proc. Iowa Acad. Sci., vol. 31, p. 236.
3 l. c., p. 232.
4 l. c., p. 406.

AECIDIUM ONOBRYCHIDIS Burrill (7)
On *Apios tuberosa*, Oskaloosa, July 7. Moore, July 10.

This *Aecidium* is apparently rather rare as the infected spots are conspicuous enough so that it should have been collected more frequently. Two collections in two counties were made within a week during the past summer. In each instance the aecia were badly parasitised by *Tuberculina persicina*. This would indicate a more abundant rust than collections would indicate, or a most interesting adaptibility on the part of the parasite in choosing its host. Previous collections of this *Aecidium* are recorded from Ames by Thomas, 1879, and Hitchcock, in 1885-6, and from Decatur county by Anderson in 1900.

USTILAGO LORENTZIANA Thumen (——)
On *Hordeum jubatum* L., Oskaloosa, July 7.

This western smut was collected in great abundance in one locality. So far as the writer is aware this is the most eastern collection of this species, the range of which is from North Dakota to Washington and California.

UROCYSTIS ANEMONES (Pers.) Schroet. (856)
On *Anemonella thalictroides* (L.) Spach, Moore, May 25.

A single infected leaf was found. Clinton records this host only from New York.

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