

**Literature cited**

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**CHIVES RUST AT OTTAWA, ONTARIO<sup>1</sup>**

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Rust, caused by Puccinia mixta Fckl., has long been known on chives (Allium schoenoprasum L.) from the vicinity of Victoria and Vancouver, B. C., most of the available records having been listed by Savile (2). This rust, which has often been confused with Puccinia porri (Sow.) Wint. and other species (2), is practically confined to chives; but onion (Allium cepa L.) is occasionally attacked when grown close to infected chives. It was recorded by Arthur (1) from Washington, on the Pacific coast, and from Connecticut and New York, on the Atlantic coast. There is also a specimen in DAOM from Woods Hole, Massachusetts. The rust has apparently not previously been recorded in eastern Canada or far inland.

On 14 June 1969 a heavily rusted clump of chives (Savile 5032) was found in a garden at Qualicum on the outskirts of Ottawa. Uredinia were abundant and telia already common. The intensity of infection indicated that the clump must have been infected in 1968. However, there was no infection in a clump in the adjoining garden, from which the rusted clump was derived in 1967. On 10 July 1969 Dr. R. V. Clark discovered a lightly infected clump, with uredinia predominant, in a garden at Meadowlands, about 3 miles from Qualicum.

All North American specimens examined fall within the range of variation seen in European specimens: but different outbreaks seem to stem from separate introductions. In the British Columbia specimens 2-celled teliospores range to 43  $\mu$  long, and 1-celled spores are common. In the Ottawa specimens 2-celled teliospores range to 53  $\mu$  long, and 1-celled spores are few. In the Massachusetts specimen (W. R. Taylor, July 1947, DAOM ex herb. Wehmeyer) 2-celled spores range to 50  $\mu$  long and 1-celled spores are abundant. Thus we have at least

three biotypes of this rust in North America, apparently separately introduced with seeds or bulbs. The plant is ordinarily sold as seed, to which detached teliospores may possibly adhere; but it is probable that bulbs, with sori on the scales, are occasionally brought in clandestinely in settlers' effects.

Because chives is grown predominantly in home gardens the extent of the outbreak is not easily assessed. This preliminary note is presented to encourage readers to check all plantings that they see.

Control of the rust may prove difficult, since the summer use of fungicides would defeat the purpose of growing the plant. However it may be practicable to use a fungicide very early, in the period of teliospore germination. It is probably advisable, where chives is grown in a flower bed that is sprinkled regularly, to cover the plants with plastic during sprinkling, and apply water gently to the soil. It is proposed to dig the infected plants of Qualicum in the fall, clean them off thoroughly, and replant them in shady sites where they will require less watering. A few plants will be left untouched until spring and watched for development of aecia, which are not often reported.

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2. Savile, D. B. O. 1961. Some fungal parasites of Liliaceae. Mycologia 53:31-52.

**POTATO LATE BLIGHT IN CANADA IN 1844-45**

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The following paragraph is quoted from a study (1) of the historic epidemic of potato blight (Phytophthora infestans (Mont.) de Bary) which broke out in Europe in 1845:

"Although the attack took Europe completely by surprise, blight had already been ravaging the potato crops of North America in the previous two seasons. Stevens (2) has charted the annual progress of the disease from its beginnings in 1843 in the five States closest to the great ports of the east coast of the United States, to an expanded area in 1845 which closely approximates to the limits within which blight is a serious

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