Black Knot

The term black knot is used to designate a disease with black knotty excrescences.

Apiosporina

Ascomycetes, Pleosporales

Asci are in locules, without well-marked perithecial walls, immersed in a massive, carbonaceous stroma, erumpent and superficial at maturity. Spores are hyaline, unequally two-celled.

Apiosporina morbosa (formerly *Dibotryon morbosum*). Black Knot of plum and cherry, Prunus Black Knot, Plum Wart, widespread and serious on garden plums, also present on sweet and sour cherries, chokecherry, and apricot. Apparently a native disease, destructive in Massachusetts by 1811 and the pathogen described from Pennsylvania in 1821, black knot has been reported on peach, long thought to be immune.

The chief symptoms are black, rough, cylindrical or spindle-shaped enlargements of twigs into knots two to four times their thickness and several inches long (see Fig. 1). Infection takes place in spring, but swelling is not evident until growth starts the following spring, at which time the bark ruptures, and a light yellowish growth fills the crevices. In late spring this is covered with an olive green, velvety layer made up of brownish conidiophores and one-celled hyaline conidia of the anamorph *Hormodendron* state. Conidia are spread by wind.

In late summer black stromata cover the affected tissues, and the galls become hard. Asci are formed during the winter in cavities in the stroma; ascospores are discharged and germinate in early spring, completing the 2-year cycle. Knots are produced from primary infection by ascospores or from secondary infection from mycelium formed in old knots and growing out to invade new tissue. Limbs may be girdled and killed; trees are stunted and dwarfed, nearly worthless after a few years. Old knots may be riddled with insects or covered with a pink fungus growing on the *Apiosporina* mycelium.

Control Cut out infected twigs and branches, 3 or 4 inches beyond the knot, to include advancing perennial mycelium. Do this in winter or before April 1. Eradicate or thoroughly clean up wild plums and cherries in the vicinity. Spray at delayed dormant stage in spring (just as buds break) with bordeaux mixture or with liquid lime sulfur. The latter is preferable unless oil is combined in the spray as an insecticide. Spray with lime sulfur at full bloom. **Dibotryon morbosum** (see *Apiosporina morbosa*). Black Knot of plum and cherry, Prunus Black Knot,

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Fig. 1 Black Knot on *Prunus* sp.

Plum Wart, widespread and serious on garden plums, also present on sweet and sour cherries, chokecherry, and apricot.

Leptosphaeria

Ascomycetes, Dothideales

Perithecia in clusters on wood; spores dark, with several cells.

Gibberidea heliopsidis (see *Leptosphaeria heliopsidis*). Black Knot, Black Patch on goldenrod and sunflower.

Leptosphaeria heliopsidis (formerly *Gibberidea heliopsidis*). Black Knot, Black Patch on goldenrod and sunflower.