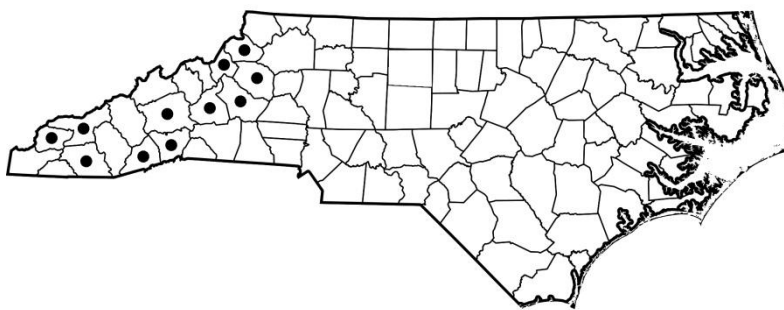


# *Ganoderma tsugae* Murrill

Syn: *Fomes tsugae* (Murrill) Sacc. & D. Sacc.

Profile Group: Basidiomycota, Polyporales,  
Ganodermataceae

Macroscopic characters	shape	Applanate; dimidiate to flabelliform
	size	Up to 20 x 30 x 7 cm; single or in clusters
	texture	Smooth to irregularly rugose and wrinkled
	pileus	Reddish brown to mahogany or almost black; highly varnished laccate crust
	stipe	Usually lateral; often vertical and well developed; up to 5 cm wide and 9 cm long; continuous and concolorous with pileus
	context	Cream colored to pale buff; azonate; spongy to tough; up to 5 cm thick
	pore surface	Cream colored when fresh; bruising and drying ochraceous to light brown
	pores	Circular to angular; 5-6 per mm
	tube layer(s)	Pale purplish brown; up to 1.5 cm thick
Microscopic characters	hyphal system	Trimitic: generative, skeletal and binding hyphae
	clamp connections	Present on generative hyphae
	sterile elements	N/A
	basidiospores	Ellipsoid; truncate at the apex; pale brown in KOH; wall two layered with interwall pillars between layers; outer wall with pronounced depressions; 13-15 x 7.5-8.5 um
Habitat characters	substrate/host	Living and dead conifers in several genera; almost exclusively on <i>Tsuga</i> (hemlock) in eastern U.S.
	seasonality	Annual
	type of decay	White butt rot of heartwood in living and dead conifers
	range	Widely distributed in eastern forests from Canada to the Gulf Coast region, also common in the Southwest.
Notes		Apparently restricted to conifers
References		Overholts, 1953; Gilbertson & Ryvarden, 1986; Grand & Vernia, 2005B



Species distribution in North Carolina

## ***Ganoderma tsugae* Murrill**



Habit of Basidiocarps



Habit of Basidiocarps



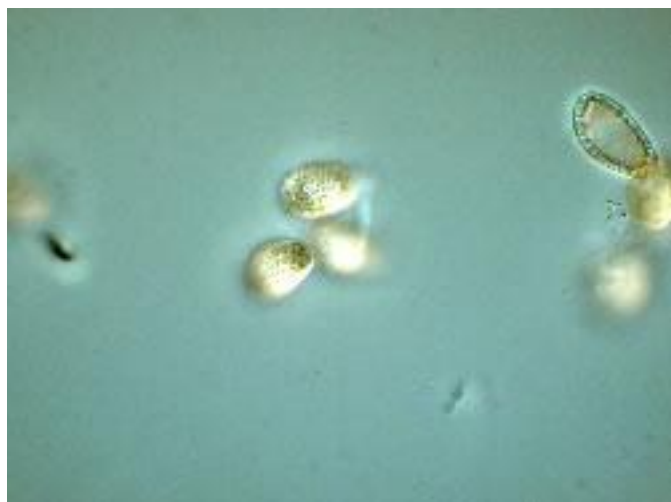
Habit of Basidiocarp



Habit of Basidiocarps



**Basidiospores – 1000 X**



**Basidiospores – 1000 X**