

“Alison’s Gloiodon”: A Palmetto Unique to Science and Strathcona Provincial Park (for now...)!¹



Figure 1: Saba Palmetto rarely associated with Strathcona Provincial Park (picture from public domain)

There may be stranger things in remote parts of Strathcona Park than Horatio might think in heaven and earth. Though fossil cycads can and have been found in the park, and climate change is upon us progressing irreversibly, it would defy science and common sense, to find a native palmetto endemic to Vancouver Island in the subalpine reaches of Strathcona Provincial Park. And yet, it is so, for those who favour common names over botanical Latin taxonomy Strathcona Provincial Park has been found to be home to a “palmetto” new to science. It is a palmetto, of sorts. It is a member of the “palmetto fungi,” which is the common genus name for “Gloiodon.” (It is pronounced “Gloy-Oh-Don.”) The accepted name for this new species of the Gloiodon in the Vancouver Island mycologist community is “Alison’s Gloiodon,” (the formal Latin name is being worked on.)

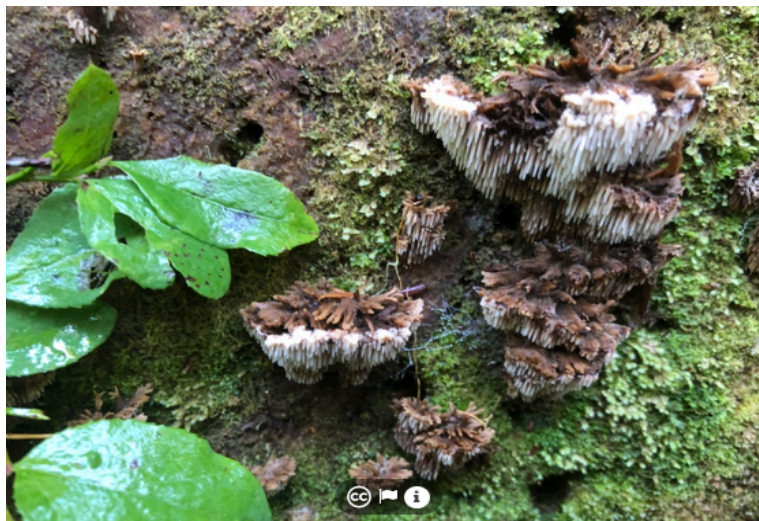


Figure 2: “Alison’s Gloiodon”

“Gloiodons” are already known to be quite rare. One will not find references to them in even the best mushroom handbooks. **Figure 1** which illustrates a classic Texan *Sabal Palmetto* might seem spurious, however it can help one understand the classic description of the genus, and its association with palmettos. Gloiodons “have resupinate to effuso reflexes or hat-like, brownish fruiting body with a prickly hymenophore.”ⁱⁱ In other words, as in **Figure 2**, like palmettos Gloiodons have a brushy brown cap/canopy with fibres pointing up or down. They are a toothed fungus in which the hymenium consists of spines that resemble palmetto fronds pointing down. This genus was originally described by the Finnish mycologist Peter Karsten in 1879. As a tooth-fungus it was originally grouped with the *Hydnum* genus, which includes the ever popular (edible) *Hydnum washingtonianum* (formerly *H. repandum*), hedgehog mushroom. Unlike some *Hydnums*, Gloiodons are not edible.)

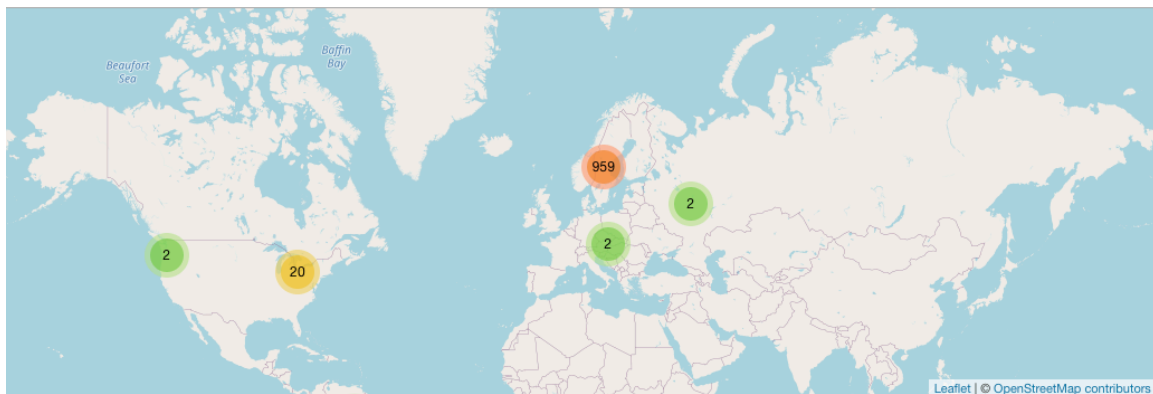


Figure 3: Map of known Gloiodon species distribution (Encyclopedia of Life)ⁱⁱⁱ

As noted, Gloiodons are rare, except it seems in the Baltic states. From what little documentation is available, the species found in Europe is *Gloiodon strigosum*. In North America, three more species are recognized, *Gloiodon occidentalis*, *Gloiodon nigrescens*, and *Gloiodon stratosus*. Gloiodons are wood decomposers. They are usually found on rotting spruce. That in part explains the high incidence of *Gloiodon strigosus* in the Baltic forests where spruces are often the dominant trees. In the West that means that Gloiodons are found in association with Sitka spruces. Alison’s Gloiodon was found on decomposing mountain hemlock (*Tsuga mertensiana*.)

For various reasons some of the attributions in the Encyclopedia of Life Project may be erroneous, because the species are morphologically alike and the Encyclopedia of life entries are not verified by DNA analysis. In 2019 we photographed a *Gloiodon* in Strathcona Park and I uploaded photos of the observation to INaturalist, which the well-known American mycologist, Noah Siegel of *Mushrooms of the Redwood Coast*, kindly, if possibly erroneously, identified as a Western Gloiodon

Gloiodon occidentalis). That identification made sense because it is the species to be expected regionally.

In 2021 Strathcona Wilderness Institute hosted its annual Mycology Workshop which brings together some of BC's top mycologists, (Dr. Shannon Berch, Dr. Thom O'Dell, Andy MacKinnon and Juliet Pendray.) By chance a *Gloiodon* had been photographed a few days before, and it proved to be an interesting point of discussion which nobody could quite identify. Dr. Berch therefore decided that a specimen was needed for DNA analysis, so a specimen was obtained on Dr. Berch's Ministry of Environment and Climate Change permit and sent for analysis to the University of Victoria.

The DNA results came in May 25 2022: "Genbank does not house another sequence belonging to this species." These results confirm that this is definitely not similar to a *Gloiodon occidentalis*, and therefore a distant relative. The closest matches are 85% genetic similarity with *Gloiodon strigosus* ("the ragged palmetto fungus"). This is a new species whose closest relative is the lesser documented *Gloiodon nigrescens* ("the blackening palmetto fungus") which shares 97% of its genes.

It is biogeographically significant that the genetic analysis indicates that this appears to be a Vancouver Island endemic. It is not closely related to the regionally dominant species, *Gloiodon occidentalis*, but more so to the globally distributed type-species *Gloiodon strigosus*, and the even more rare *Gloiodon nigrescens*. Alison's *Gloiodon* is a species unique to Vancouver Island, and until further notice unique to Strathcona Park, "Home of the *Gloiodon*!"

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ⁱ *Special thanks are owed to Dr. Shannon Berch for identification of the species. All and any in this text errors are entirely the author's.*

ⁱⁱ <https://memim.com/gloiodon.html>

ⁱⁱⁱ <https://eol.org/pages/16784>