

Gwaii Forest Society  
Final Report

*Long-term Fungal Diversity Inventory of Haida Gwaii*

Haida Heritage and Forest Guardians  
March 16, 2009

## Summary

### Goals accomplished in **2008 Quarters**:

- Haida Gwaii-experienced mycologists completed 3 rounds of field inventory in the spring, early fall and late fall of 2008 (see **Appendix A**, Species List)
- Transfer of expertise to local and Haida surveyors
- Outreach to public – 2 walks and 3 talks in Skidegate, Tlell and Masset
- Connection to local agencies: MoE, BC Parks, Gwaii Haanas, UBC, Mt Moresby Adventure Camp

### Goals accomplished in **first quarter 2009**:

- Poisonous Mushrooms of Haida Gwaii pamphlet (forthcoming March 25<sup>th</sup>, 2009)
- Haida Laas article
- UBC BC E-flora website, created E-funga *Haida Gwaii*:  
<http://www.geog.ubc.ca/biodiversity/eflora/FungiofHaidaGwaii.html>
- Herbarium additions to UBC and Skidegate Museum
- Haida Mapping created Mushroom Map of collections
- Pictorial collections of many species on website, GFS reports, pamphlet

## Narrative – Project Goals

Field Inventory Results. During the field seasons of 2008 a total of 68 sites were visited including locations in Gwaii Haanas National Park and Haida Heritage Site (GH) and Naikoon Provincial Park. Three field trips were conducted; the first of one week in May, a second of three weeks in September, and the last of one week in late October and early November. A total of 1138 collections of fungi were preserved and studied, representing at least 421 species, at least 174 of which are new records for the known Haida Gwaii mycota. The known number of fungal species in Haida Gwaii now stands at 879, with 656 documented by us during five years of inventory. The 2008 GFS inventory was a very successful effort, as 44.5% of species found were new additions to the species list of all Haida Gwaii. The field studies of 2008 greatly expanded the known diversity and distribution of macrofungi in Haida Gwaii (see **Appendix B. Data Summary** and **Appendix C. Oluna Ceska Field Notes**).

There were a number of new areas surveyed such as sites in the Skidegate Plateau and old growth cedar and spruce as well as unique Queen Charlotte Lowlands and dune ecologies that yielded rare species (see **Haida Gwaii Mushroom Map**).

Chanterelle volumes and values. Singular conditions in 2008 had a large impact on the reliability of chanterelle and bolete volume records at Skidegate Lake. Atmospheric and terrestrial factors played a significant factor in low and late incidence of fruiting, verified both by several expert observations/evidence. Contact with the BC mycologist who completed a previous survey of chanterelles for BCTS, as well as dialogue with local buyers and pickers during 2008, convinced the project team that a true reflection of volumes and values calculation would be meaningless for such an atypical year, as there would be little confidence in the numbers produced (Marty Kranabetter, MoFR, Ken and Betty Foote, Lynda Dixon, Wolfgang, pers. comm. 2008). However what the fungal dataset did discover was that the richest areas for diverse species numbers was around Skidegate and Mosquito Lakes. This was important in that previous studies focused simply on chanterelles, and this study emphasized the productivity of this watershed for many unique species of macrofungi overall. Also, this inventory uncovered the presence of another, higher value chanterelle *Cantherellus cibarus* var. *roseocanus* or known commonly as a Rainbow chanterelle; information that is of great value to the local market on Haida Gwaii.

Publication. *Summary Report of 5-year MacroFungus Inventory of Haida Gwaii.* This product will be completed in early April due to consideration of the timelines of Gwaii Haanas and Skidegate Museum staff. The Poisonous Mushrooms of Haida Gwaii Pamphlet is currently in publication and 2000 copies will be ready for distribution before the end of March. The pamphlet contains fourteen Haida Gwaii photos of species, and was prepared by mycologist Paul Kroeger with in-kind support of both UBC toxicologist Anne Leathem, and Haida Laas editor Simon Davies.

Website. The Parks Canada website will have the publication of the *Summary Report of 5-year MacroFungus Inventory of Haida Gwaii*, immediately upon completion in early April 2009. Further project outreach was accomplished through the well-known site for BC naturalists and specialists, UBC's E-Flora. Specifically as a result of this project, we collaborated with UBC to create a new and unique website called E-Funga. This website will continue to be a work in progress, and will incorporate all materials from this and past year's projects including photos:  
<http://www.geog.ubc.ca/biodiversity/eflora/FungiofHaidaGwaii.html>

Enhanced database. See **Appendix A** for the full listing of species and site locations for all Haida Gwaii collection, as well as separate databases for 2008 collection only. **Appendix B** also highlights rare species, as well as edible mushroom species found on Haida Gwaii. Also, **Appendix C** contains field notes from Oluna Ceska as an additional species resource detailing species visually recognized during field inventory. One further tangible project result of the enhanced database is the attached **Mushroom Map**, and notably the species data is now in a spatialized format that will allow further GIS queries and subsequent surveys to take place with greater facility and accuracy.

Herbarium: There are over 600 total species from this year's project, and currently over 200 are at the Skidegate Museum, with the rest being labeled at UBC herbarium on museum quality rag-fibre paper. The database for museum collections has been completed along with assigned accession numbering. After a period of quarantine for standard disinfection protocol, the remainder of collection outside of Gwaii Haanas species will be housed at the Skidegate Museum.



Overall, the project exceeded all goals, particularly with extensive public outreach and multi-agency collaboration. There was much local excitement generated by this project, and with the final piece, a Poisonous Mushrooms of Haida Gwaii pamphlet, we anticipate the public response to be extremely positive. Indeed, with such critical public health and safety issues as toxic mushrooms, it is possible that the broader dissemination of this information could heal or save a life.

### Summary - Financials

Item	Rate/Unit	# units	Cost - GFS	Actuals	Notes
<b>Salaries</b>					
Field work 3 biologists	\$300/day	42 days	<b>\$12,600.00</b>	\$6,600.00	Bryce Kendrick and Christine Roberts not in field
Field work 2 biologists	\$300/day	10 days	<b>\$3,000.00</b>	\$4,200.00	worked extra days
Lab work Identification 3 biologists	\$300/day	60 days	<b>\$18,000.00</b>	\$17,790.00	
Haida Field Technicians (2)	\$200/day	38 days	<b>\$7,600.00</b>	\$4,283.88	Includes local contractor
HHFG Project Coordinator	\$250/day	10 days	<b>\$2,500.00</b>	\$5,287.51	functioned as field crew
Accessioning in Herbarium	\$300/day	15 days	<b>\$4,500.00</b>	\$4,500.00	
Report writing/Extension	\$300/day	6 days	<b>\$1,800.00</b>	\$1,800.00	
<b>Accommodation</b>					
Field crew 2 biologists	\$120/day	6 days	<b>\$720.00</b>	\$1,941.00	MMAC provided in-kind, added fuel
Field crew 3 biologists	\$120/day	16 days	<b>\$1,920.00</b>	total above	less biologists
<b>Food</b>					
Field crew 3 biologists	\$45/day	48 days	<b>\$2,160.00</b>	\$2,015.79	less biologists
Field crew 2 biologists	\$45/day	12 days	<b>\$540.00</b>	total above	
<b>Transportation</b>					
Biologists air fare	500/person	8 fares	<b>\$4,000.00</b>	\$3,033.80	increased fuel taxes
Truck rental	\$150/day	19 days	<b>\$2,470.00</b>	\$3,750.00	increased fuel prices
ferry - Kwuna		3 trips		\$144.15	Moresby sampling
Taxi		airport		\$63.00	
<b>Field/Office Supplies</b>					
Haida Mapping - field and mapping technician		1		\$1,385.18	
PAMPHLET - printing	2000			\$3,631.39	includes shipping
PAMPHLET - prep	300/day	5 days		\$1,500.00	Paul Kroeger - Simon Davies in-kind support
<b>TOTALS: GFS</b>			<b>\$61,810.00</b>	\$61,925.70	

### Narrative - Financials

The financial stage of the project was largely on track, with some few changes. Due to a family accident, Dr. Bryce Kendrick was unable to attend the second round of surveys, and Dr. Christine Roberts was unavoidably detained at the US-Canada border and was unable to survey in the late fall. Also, during some days in both the first and second round of surveys, we were accompanied by Dr. Adolf Ceska, who

provided invaluable high quality photography of mushroom species that our equipment was unable to capture. However, Dr. Ceska's presence meant less room in our field truck, so HHFG Project Coordinator was called upon to lead the field crew.

2008 saw significant spikes in oil prices, which increased air fares and field truck charge-out rates, as well as food prices on Haida Gwaii. Other additions to the original budget were ferry costs to get to Skidegate and Mosquito Lakes, as well as mapping expertise from Haida Mapping. The last significant addition was the Poisonous Mushrooms of Haida Gwaii, a first ever publication for limited run of 2000 copies.