

Ice core drilling at a temperate glacier site: Combatant Col, Mt. Waddington, BC, Canada (2006 - 2023)

Wednesday 17 September 2025 11:45 (20 minutes)

Since the early 2000s, multiple attempts have been made to recover an ice core to bedrock at Combatant Col (51.39°N, 125.26°W, 3000 m elevation) beneath Mt. Waddington in the southern Coast Mountains of British Columbia, Canada. Temperate glacier conditions and a firm aquifer at the site are a challenge for ice core drilling, but the US Ice Drilling Program 3-inch Thermal Drill has proven successful at coring in water-filled boreholes at the site. A pilot core was recovered in 2006 (65 m), a first bedrock attempt in 2010 halted at 141 m after refreezing of water in the borehole, and a 219 m long core was recovered in 2023 and assumed to terminate near bedrock. We describe lessons learned through efforts at the site over the years.

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Session Classification: Oral sessions

Track Classification: Complicated conditions