



Report on samples collected for radiolaria identification in the Gladys Lake-Mount Bryde area, near Atlin, British Columbia

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Front cover: Typical outcrop of ribbon chert in the Laidlaw Lake area (north of Gladys Lake). Site of sample RCA23-15-15.e. **Photo by Mitch Mihalynuk.**

Back cover: Resistant radiolaria-bearing chert clasts in conglomerate of the Farnsworth wacke unit. **Photo by Mitch Mihalynuk.**



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Keywords: radiolaria, ribbon chert, Kedahda Formation, Farnsworth wacke, Atlin terrane, Cache Creek terrane, Triassic, Jurassic, overlap, ophiolite

Summary

Geofile 2024-13 reports on 35 samples collected in 2023 as part of the joint federal-provincial GEM-GeoNorth project. Samples were collected from outcrops identified in the field as radiolaria bearing during framework mapping of the Gladys Lake area (Mihalynuk et al., 2024a), and as part of an ongoing topical study extending into south-central Yukon (Zagorevski et al., 2021).

Standard radiolaria extraction and identification were carried out at the Université Claude Bernard. Ages could successfully be determined from radiolaria extracted from 21 of the 35 samples. Ages of conodonts recovered during the extraction are pending.

All radiolaria identified are Triassic or Early Jurassic; ages consistent with previous collections sampled from Kedahda Formation rocks (as defined in Zagorevski et al., 2021), along strike in southern Yukon (Cordey et al., 1991) and south of Atlin (Mihalynuk et al., 2003). Together with the Farnsworth wacke unit, which contains chert sharpstone conglomerate derived from the Kedahda Formation, the units appear to comprise a deformed overlap succession on Cache Creek and Atlin terranes. Volcanic grains in the wackes were likely derived from erosion of adjacent Stikine and Quesnel terranes (cf. Zagorevski et al., 2021; Mihalynuk et al., 2024a). If so, these samples help to demonstrate proximity of Atlin, Cache Creek, and Quesnel-Stikine terranes by Late Triassic.

In this release ([BCGS_GF2024-13.zip](#)): Appendix 1 contains fossil identification data in Excel and .csv formats; Appendix 2 contains a Manifold® v9 project file with georeferenced fossil locations; Appendix 3 contains a Google Earth kml format file; Appendix 4 contains a geodatabase suitable for import into

spatial SQL; and Appendix 5 contains a shapefile package.

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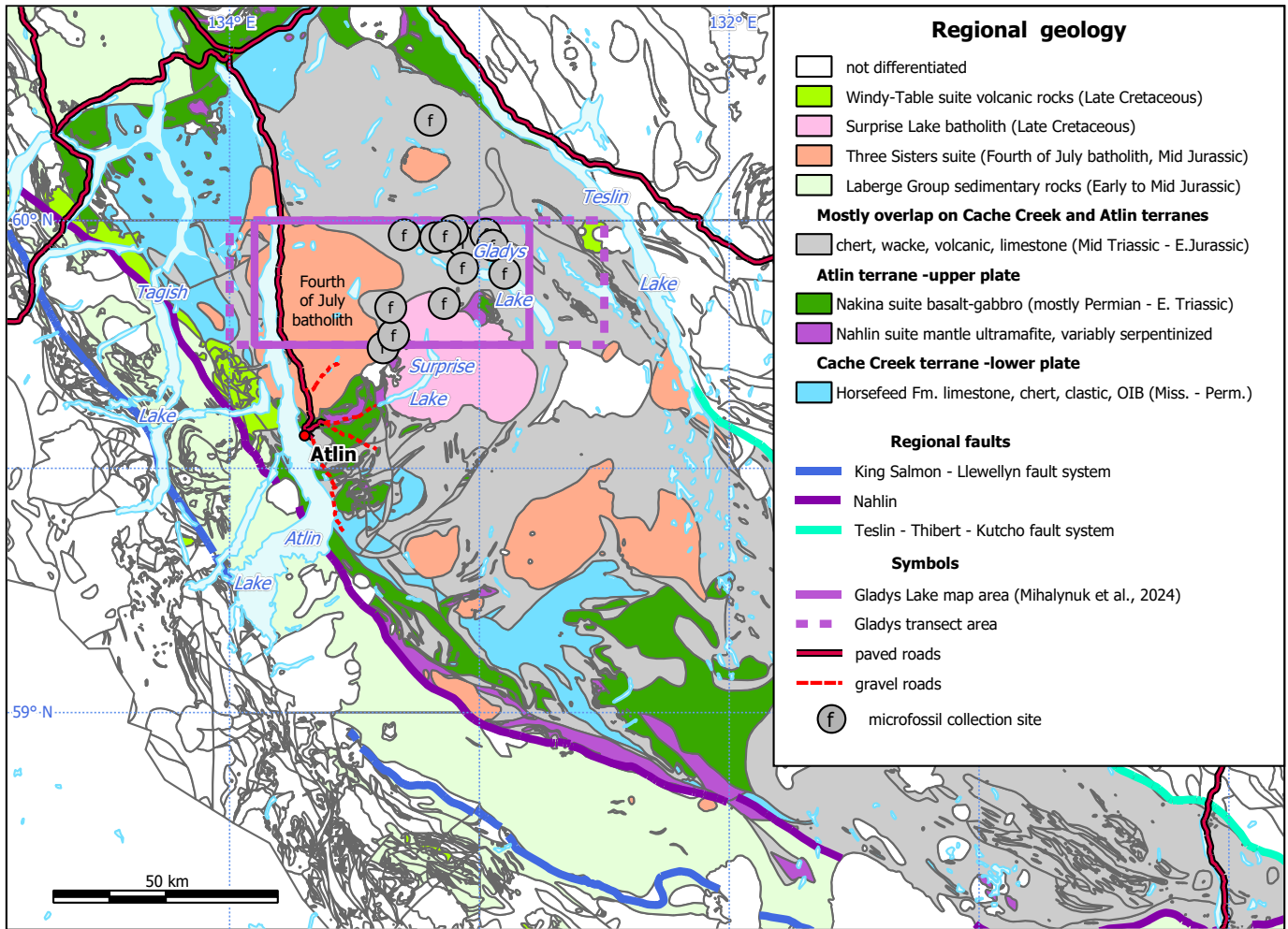


Fig. 1. Regional geological setting (after Cui et al., 2017 and Yukon Geological Survey, 2019) of the radiolaria sample sites reported here. GEM GeoNorth Gladys mapping project area is shown for reference (see Mihalynuk et al., 2024a, b for a geological overview).

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