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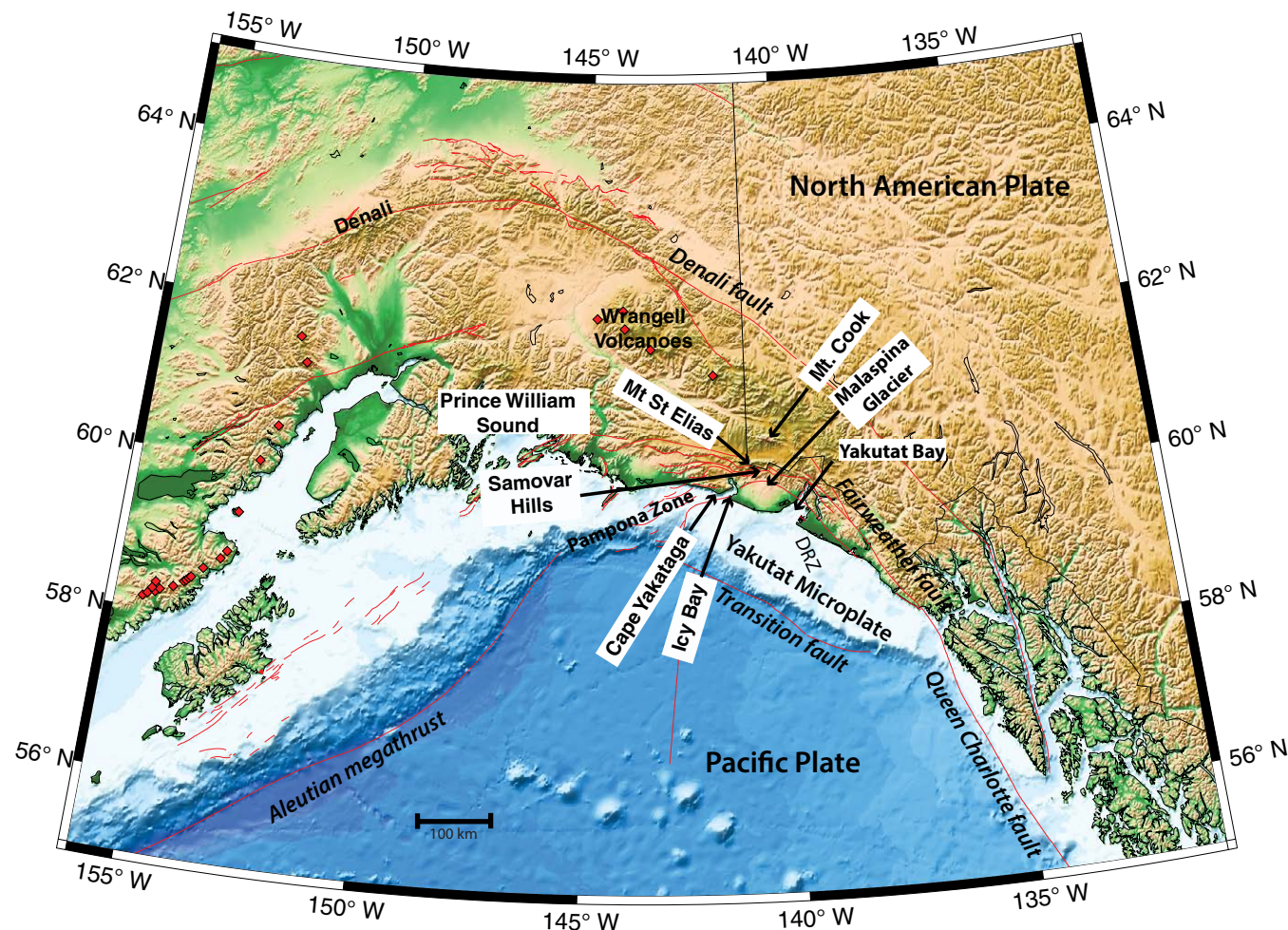


Figure 1. Base map of study area. Background image is a shaded relief map created from digital topography data. Active volcanoes are shown as red diamonds. Major faults are shown as solid, red lines. Abbreviations: DRZ—Dangerous River Zone. This figure is a layered PDF with separate layers for geologic and geographic features. Turning off layers can reduce clutter in the figure to clarify place names. To view the figure's layers "Geologic Annotations" and "Geographic Annotations" in the PDF version of this paper, open the PDF in Adobe Acrobat or Adobe Reader. To view the layers while reading the full-text version of the paper, click <https://doi.org/10.1130/GES01488.11> to download a PDF of the figure.

- the Fairweather and Queen Charlotte faults may have been a continuous strike-slip boundary parallel to Pacific–North America plate motion.
2. We clarify a poorly constrained issue of the geometry of the eastern edge of the subducting Pacific/Yakutat lithosphere. We present a range of feasible solutions for this problem that will be testable with imaging results from the USArray.

3. We develop a novel concept for the geometry of crustal faults in the vicinity of Mount St. Elias and Mount Logan; we refer to this concept as the middlebuster model.
4. We develop a comprehensive, regional framework of crust-mantle interaction for the Yakutat microplate linking seismicity, GPS velocity measurements, and structure at a range of scales.