Recent Deglacierization of the Upper Wheaton River Watershed, Yukon

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My research involves the study of Wheaton Glacier, the largest glacier in the Wheaton River watershed in southern Yukon Territory. Since the Little Ice Age, Wheaton Glacier has lost 50% of its area and 58% to 63% of its mass. Thinning and retreat have accelerated in the past 40 years. Despite increasing winter snowfall, rising temperatures continue to drive the persistent negative mass balance of the glacier. Glacier recession and periglacial activity are altering sediment delivery in the upper Wheaton River watershed. Sediment is moving downstream from the Wheaton Glacier forefield and large, out-of-channel debris flows are affecting the fan at the mouth of the valley. Evidence from sediment cores collected on the distal part of the fan suggests that debris flows have dominated sedimentation at the mouth of the valley during the last half of the Holocene, coincident with Neoglacial advances and the historic period of rapid glacier retreat.