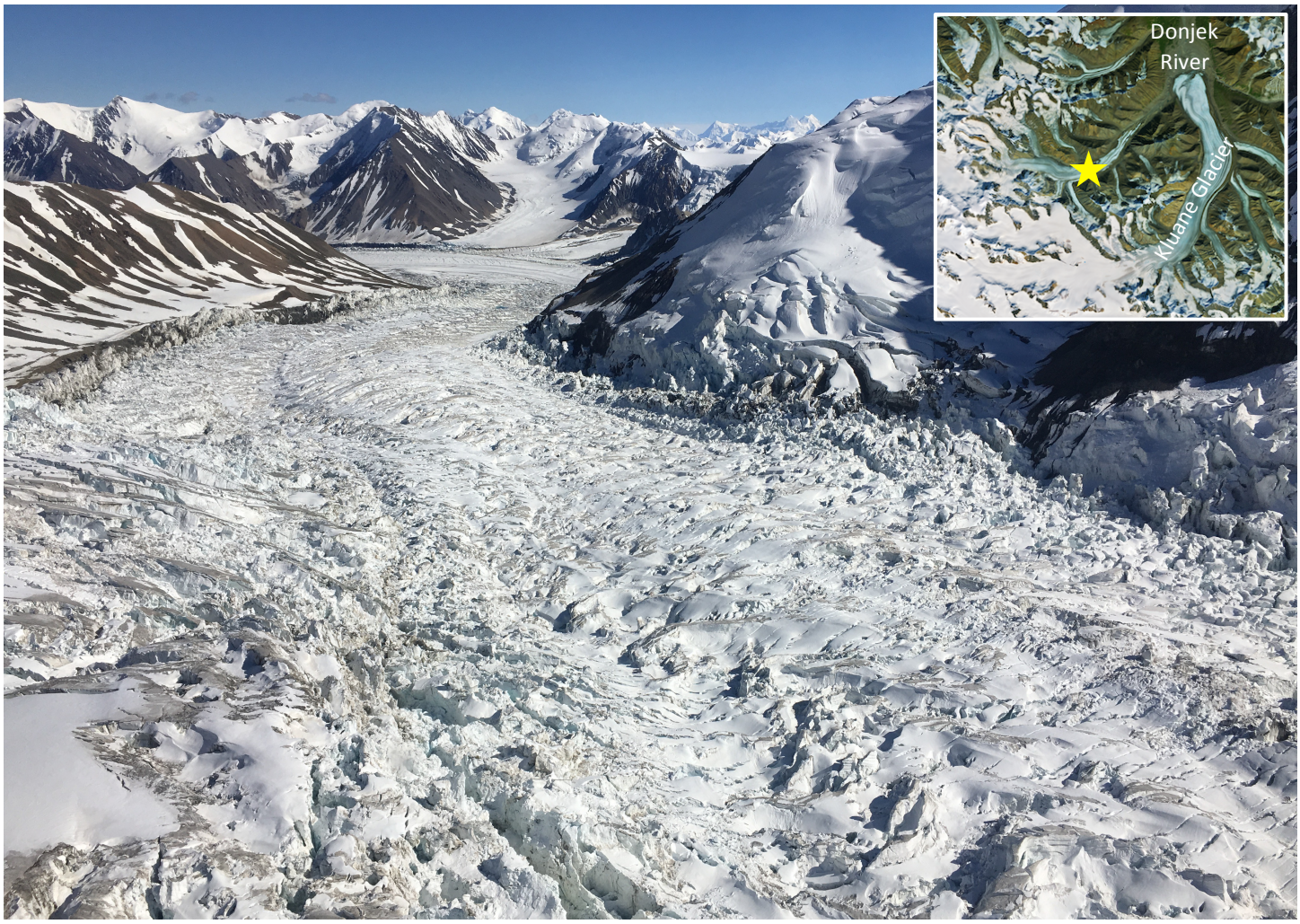
GLACIER SURGE UNDERWAY IN THE DONJEK RIVER HEADWATERS

SFU GLACIOLOGY



Looking down an unnamed surging glacier in the headwaters of the Donjek River on 16 July 2018 (G. Flowers).

While conducting an airborne photographic survey of the Kluane Glacier on 16 July 2018, researchers from Simon Fraser University noticed a chaotic looking glacier in a tributary valley. A reconnaissance of the valley revealed all the telltale signs of a glacier surge: jumbled ice cliffs, stranded ice on the valley walls and chaotic crevassing.

During a surge, a glacier moves 10-100 times faster than usual. This peculiar glacier behaviour is found only in certain areas of the world, with the St. Elias Mountains of Yukon and Alaska being among the best known.

While numerous glaciers in the Kluane region are known to surge, it is rare to happen upon a glacier surge in full swing. Satellite imagery reveals that this surge began in winter 2017-2018 and has already resulted in a kilometre of glacier advance, whereas most glaciers worldwide are retreating. Unlike a climate-driven glacier advance, this advance represents a rapid transfer of ice downvalley rather than an increase in glacier volume.

For more information: contact Dr. Gwenn Flowers (gflowers@sfu.ca) or visit www.sfu.ca/~gflowers/.