

Tanytarsus gracilentus sample summary

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Archived samples

From the time series from 1977–2015, I extracted at least 10 *Tanytarsus gracilentus* individuals from 75 samples (Figure 1A). These samples span 66 of the 78 possible generations. I chose 10 as a fairly arbitrary cutoff to prevent issues with having low numbers of individuals in a sequencing pool. These include an increased chance of bias associated with unequal amounts of DNA from each individual and with non-random sampling of individuals from the population. Where we didn't have enough individuals from our primary site, Syðri Neslönd, I pulled samples from either Haganes or Kálfaströnd (Figure 1B). I extracted individuals from multiple sites for 9 generations, which should help inform whether the Lake Mývatn population of *T. gracilentus* is as panmictic as we think.

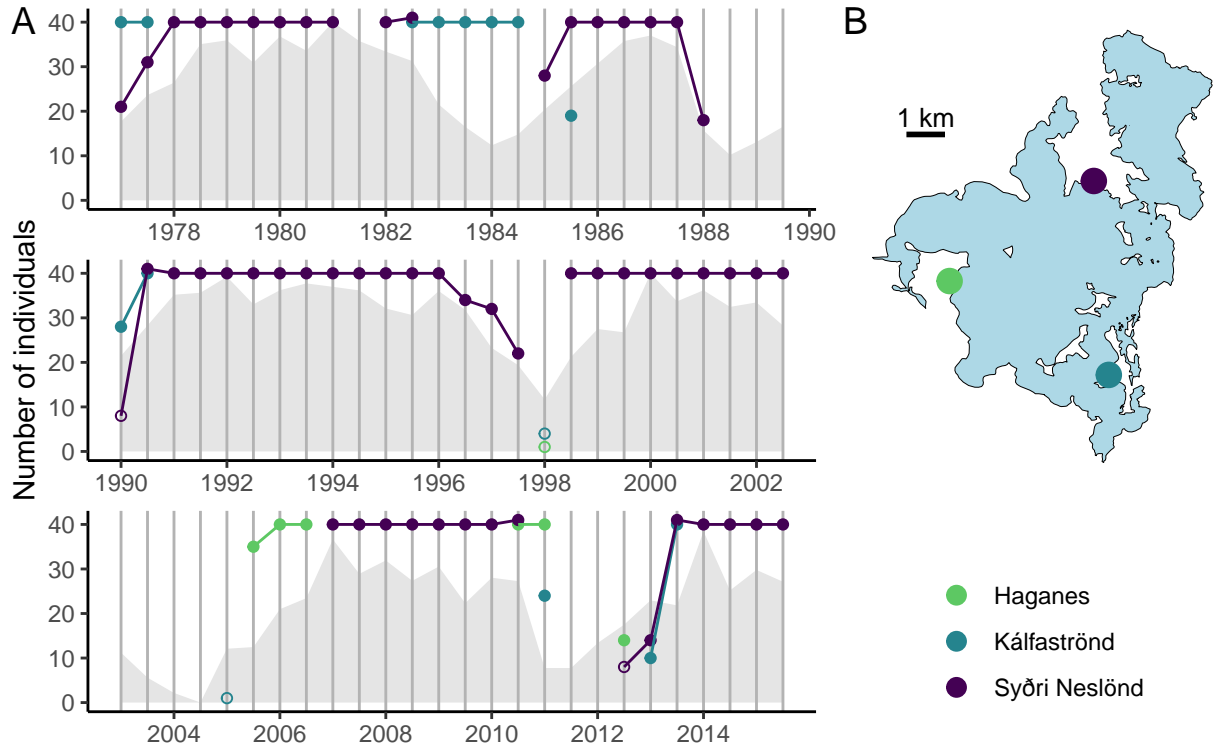


Figure 1: Sample summary for archived samples. (A) Number of *Tanytarsus gracilentus* individuals separated from each generation and site's original mixed-species sample. Solid points indicate samples I plan to sequence (those with at least 10 individuals), and hollow points are samples I don't plan to sequence. Lines connect consecutive points from the same site. The gray shaded region indicates the log-transformed *T. gracilentus* abundance at Syðri Neslönd. (B) A map of the different sites at Lake Mývatn. (A,B) Color indicates site.

Other lakes

From 30 May 2019 through 09 Jul 2019, I sampled 40 lakes outside Mývatn, of which 15 yielded *T. gracilentus* (Figure 2). I also sampled 3 sites at Lake Mývatn (see inset; all yielded *T. gracilentus*). Most of these samples are on the north coast, but I was able to get a couple in the SW corner near/within Reykjavík and another near Snæfellsjökull in the west. Only 4 of the samples yielded < 40 individuals, but I vote that we still sequence them all separately.

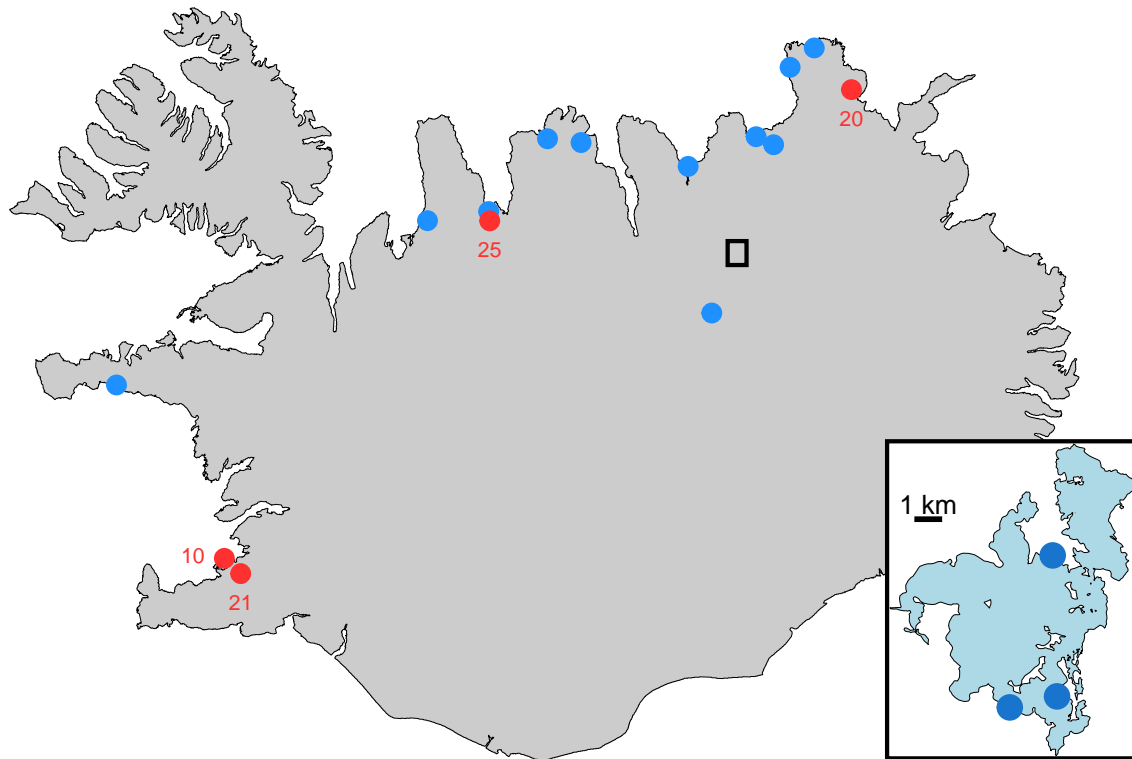


Figure 2: Map of lakes with *Tanytarsus gracilentus* sampled in spring 2019. Blue points indicate lakes where at least 40 individual *T. gracilentus* were sampled. Points in red represent lakes with < 40, and the nearby number indicates how many. The inset shows the samples taken from Lake Mývatn.