

# Off-channel rearing habitat increases drift invertebrate prey for juvenile salmonids



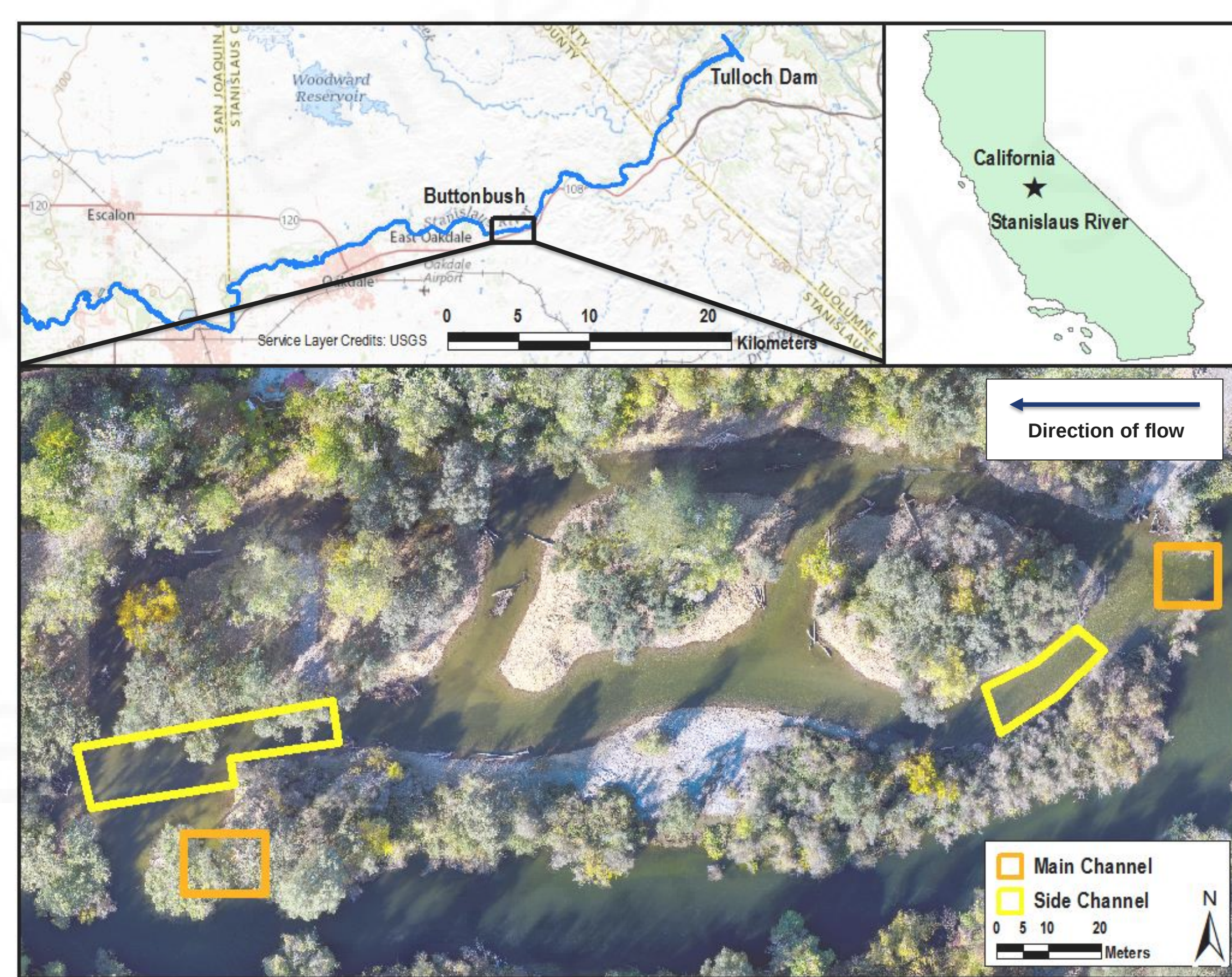
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## BACKGROUND

- Fall 2017 – construction completed at the Buttonbush Park restoration site on the Stanislaus River, CA.
- Goal – improve rearing habitat quantity and quality for native salmonids.



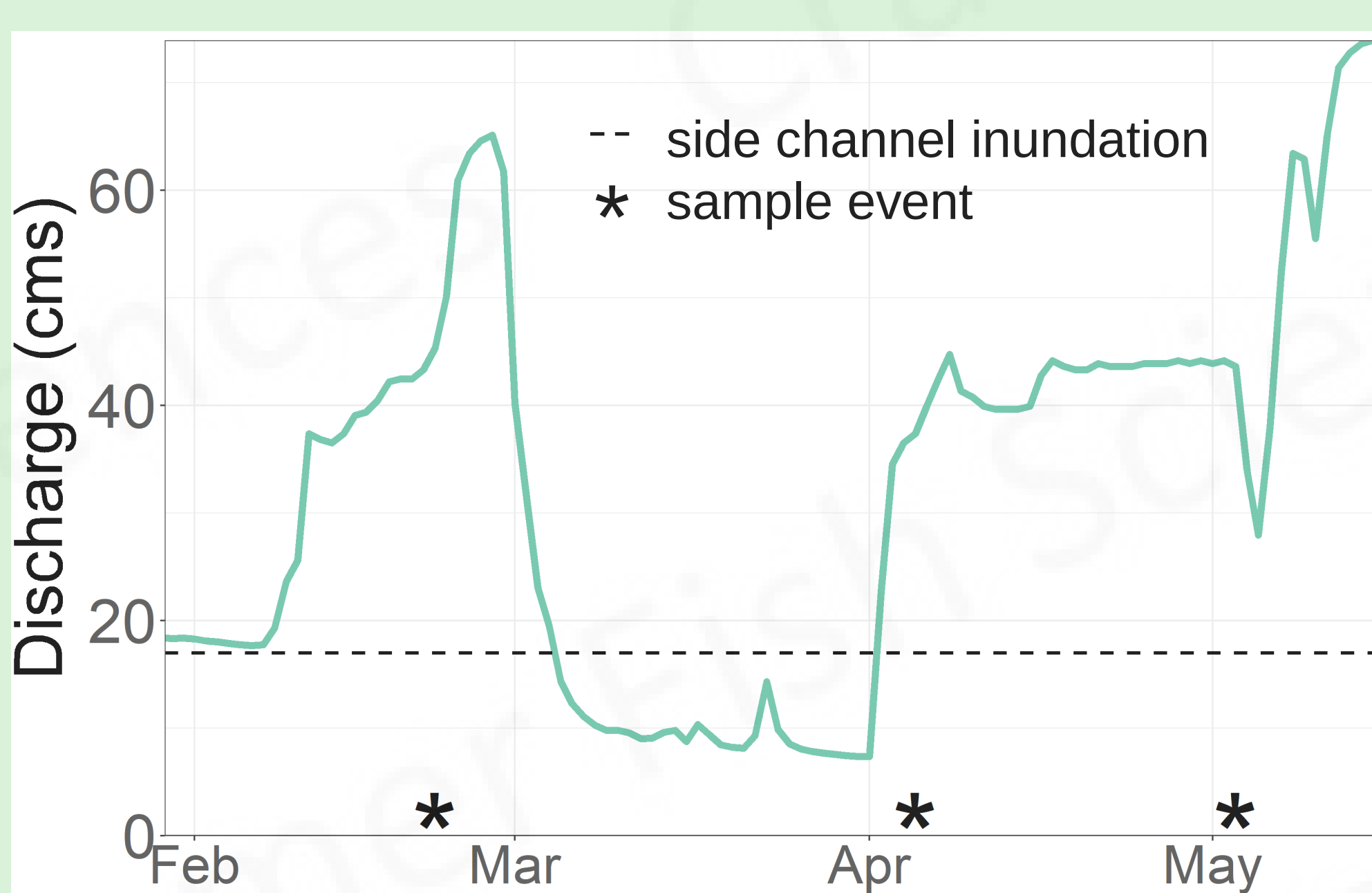
Map of drift net locations in Buttonbush side channel and main channel.

## QUESTION

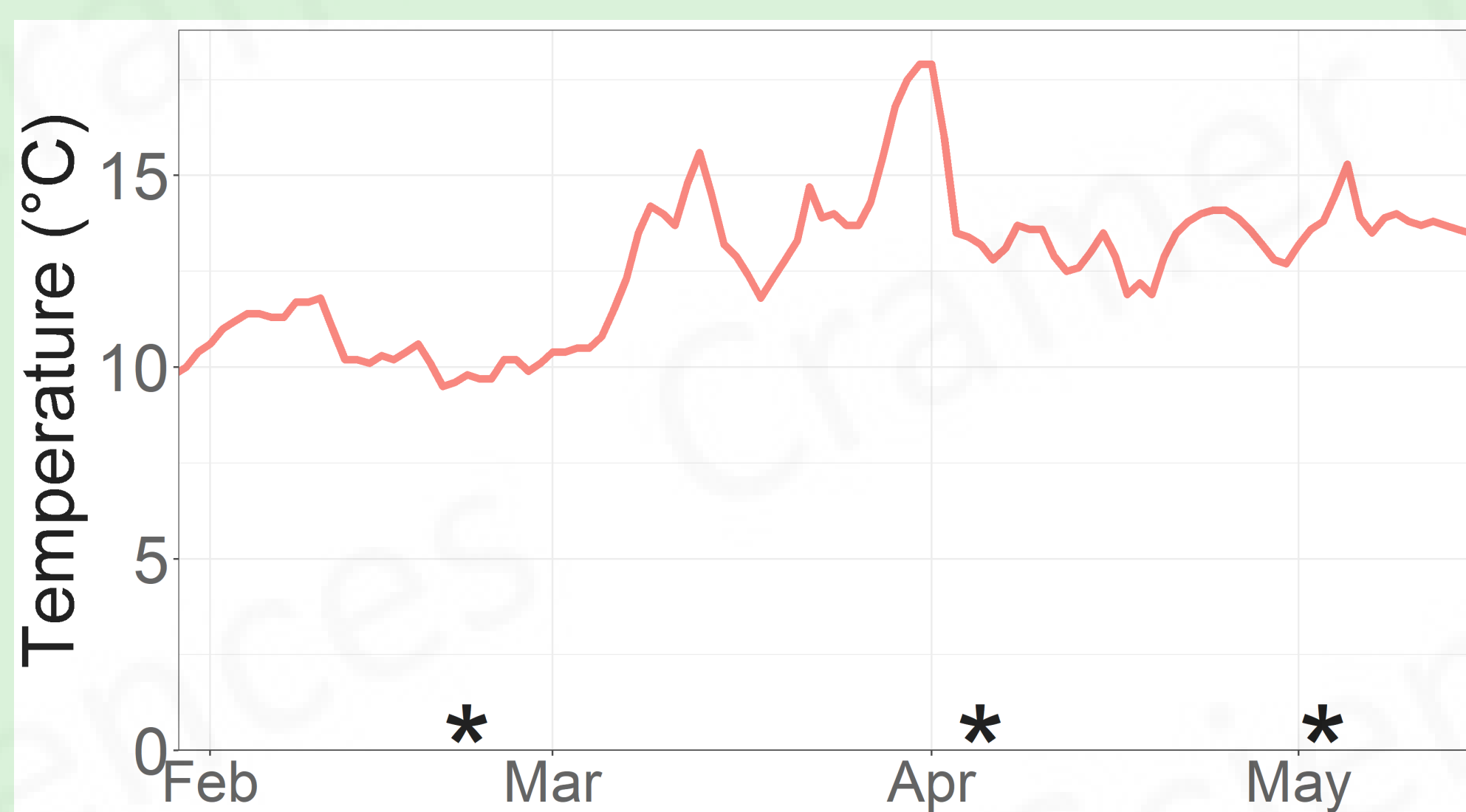
- How did invertebrate drift (i.e., juvenile salmon prey) density and biomass compare between the main channel and the newly constructed side channel in Spring 2018?

## RESULTS

**Month** had a significant effect on **density** and **biomass** of drift invertebrates.

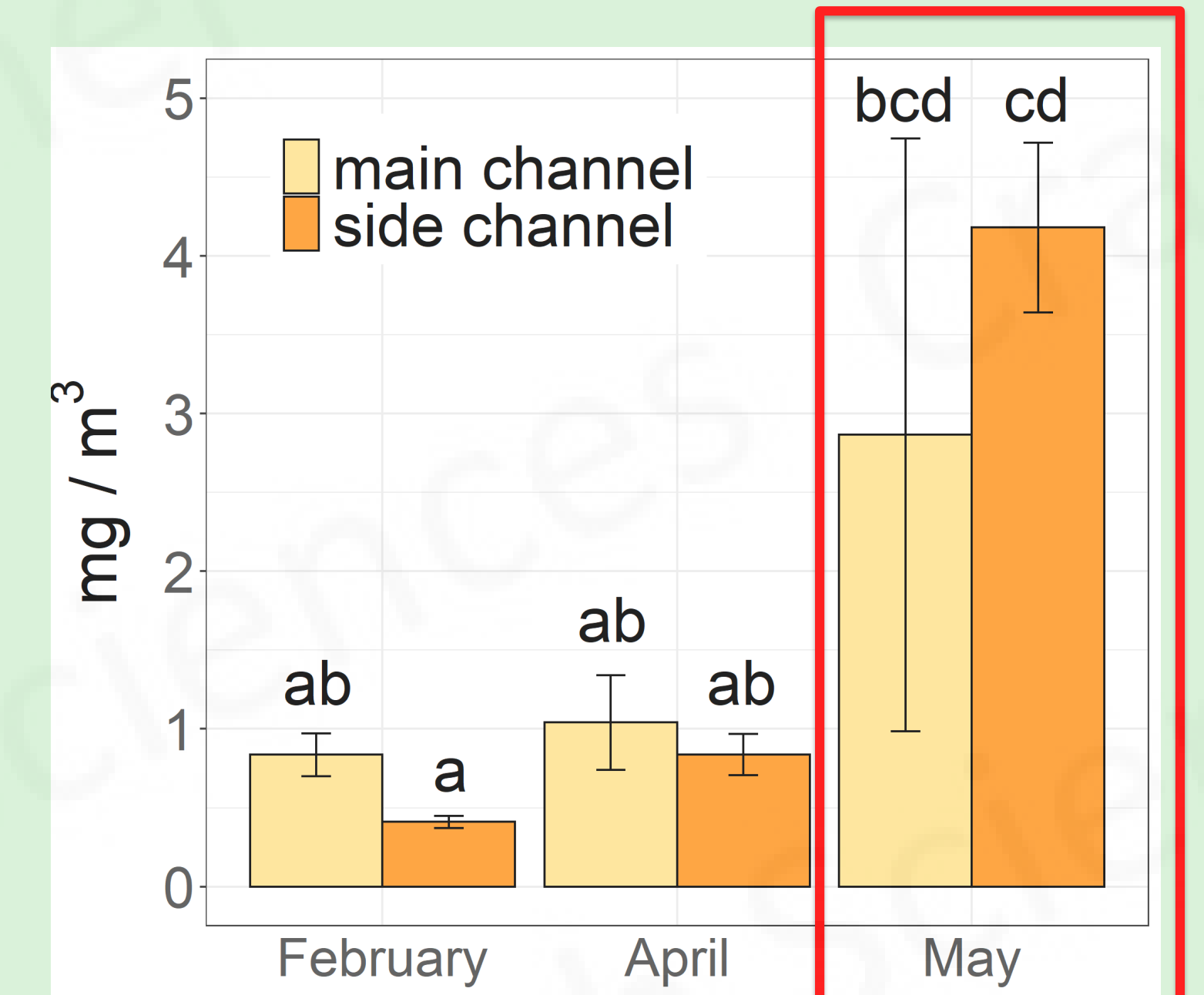
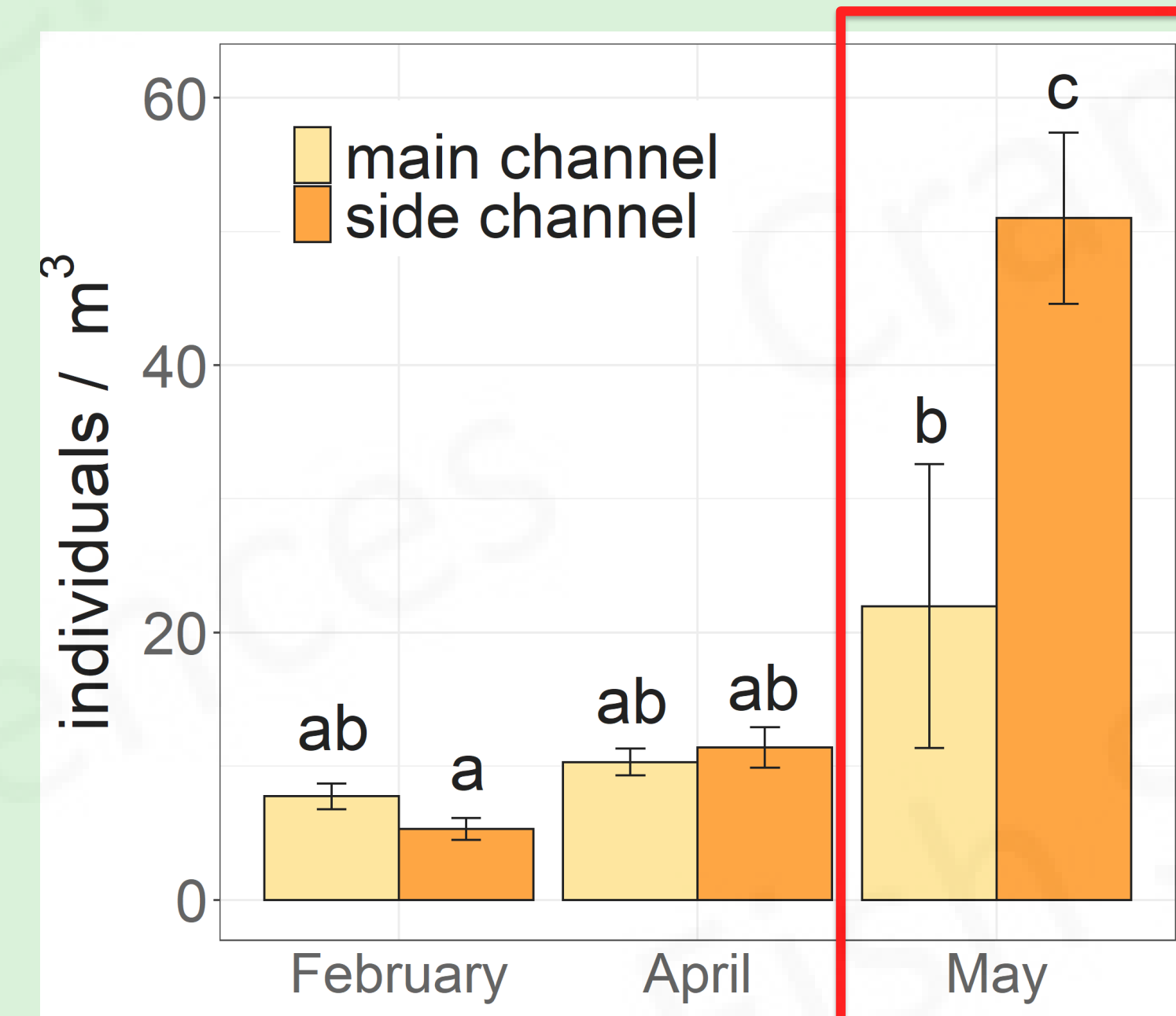


Side channel was inundated for the most consecutive days prior to the May sample event.



Mean daily water temperature increased throughout the sample period.

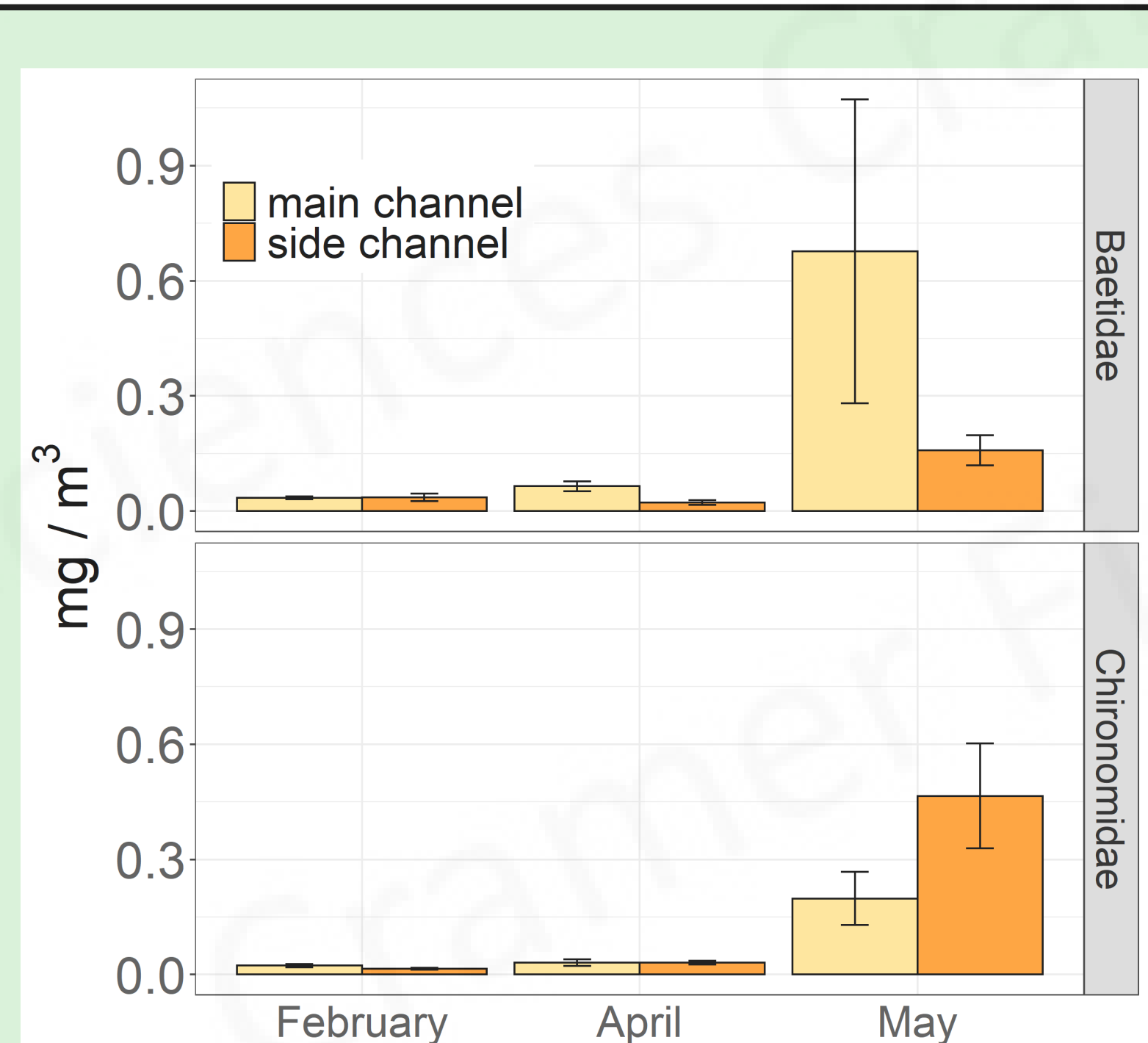
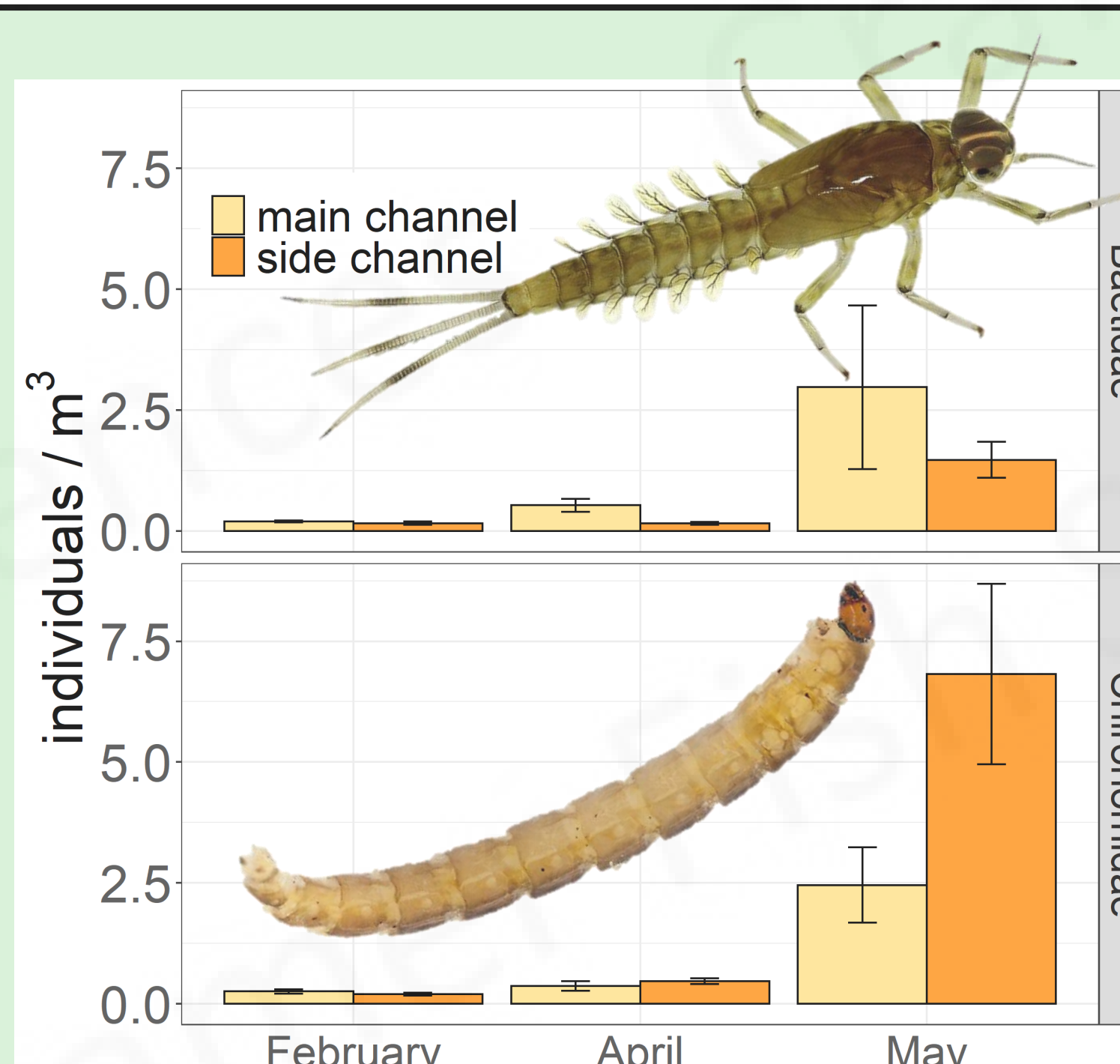
- Longer inundation duration and warmer water temperatures may have increased colonization and production rates of aquatic macroinvertebrates.
- Distinct taxonomic differences in May suggest that the side channel was producing invertebrates, in addition to receiving drifting invertebrates from the main channel.



Unique letters between treatments indicate that significant differences were observed.

Dominant taxa **density**

Dominant taxa **biomass**



Main channel – Baetidae dominant vs. Side channel – Chironomidae dominant

## CONCLUSIONS

- Longer periods of sustained channel inundation, particularly in late spring when water temperatures are warmer, may maximize juvenile salmonid prey production in off-channel habitats.

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## ACKNOWLEDGMENTS

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- Cramer Fish Sciences field staff for field collection and lab sorting of macroinvertebrate drift samples.