

# LARGER THAN LIFE TARGET ENRICHMENT

## IDEATE: THINKING OUTSIDE THE KIT TO SEE THROUGH THE FOG

Sasha Nikolaeva and Lydia Smith are part of a research team at UC Berkeley studying the coast redwood trees. Together, they have applied a custom NGS panel and target enrichment reagents from Twist to explore the connection between the redwood genome, niche survival, and climate change.

## CONSULTATION: BRANCHING OUT AND BUCK TRENDS

“Other companies were cutting costs and focusing more on fitting everything into one box rather than working with customers to devise custom probes that fit their highly specific research needs. Twist bucked the trend.”

– [Lydia Smith](#), Evolutionary Genetics Lab Manager, UC Berkeley

## DESIGN: CAPTURING CONSERVED REGIONS WITH COLLABORATION

“When you have a large genome and a relatively small target, having that many of the reads actually map back to the probes was very impressive.”

– [Lydia Smith](#), Evolutionary Genetics Lab Manager, UC Berkeley

## RESULTS: GOING BIG ON SEQUENCING COVERAGE

“I was floored by the on-target percentage, or the specificity of the capture ... We are used to seeing maybe 40% or 50% of sequenced reads on-target in larger genome organisms.”

– [Lydia Smith](#), Evolutionary Genetics Lab Manager, UC Berkeley

The capture itself was a major success from the lab's point of view. 80% of our reads mapped to the probe sequences...while spending less money on sequencing lanes than we'd budgeted.

– [Sasha Nikolaeva](#), Graduate Student, UC Berkeley



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