

Native Trout Critical Habitat Trip



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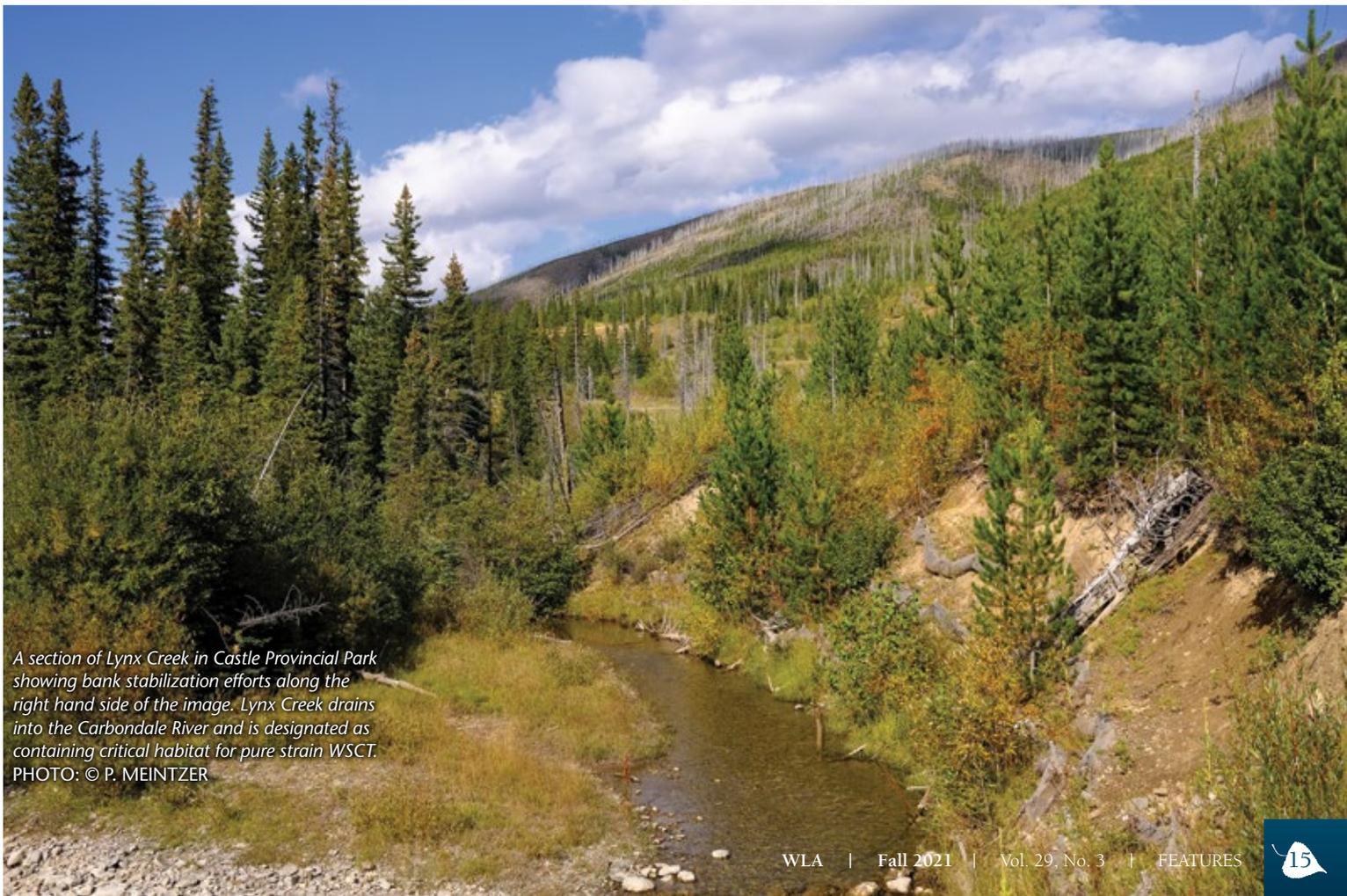
Back in September, I had the unique opportunity to join Dave Mayhood – an aquatic ecologist and the president of Freshwater Research Ltd. – on a trip to visit critical habitat sites for threatened species of native trout along Alberta’s Eastern Slopes between Calgary and the Crowsnest Pass. From Calgary we drove to Longview and then west along Hwy 541 to its junction with the Forestry Trunk Road. We then took Highway 40 south to Coleman and then continued south through Blairmore into Castle Provincial Park. As we worked our way south, we stopped at numerous creeks and

tribes and I was able to witness first-hand the impact industrial development is having on critical habitats that are crucial for the recovery of trout populations in Alberta.

Westslope cutthroat trout (WSCT), bull trout (BT), and Athabasca rainbow trout (ART) are three species of trout native to cold water streams in Alberta. As of 2019, all three are listed on the federal Species at Risk Act (SARA) as either Threatened or Endangered. Under SARA, the killing, harming, harassing, capturing and taking of listed species is prohibited and this includes activities that destroy identified critical habitat. During my

trip with Dave, we stopped at many listed WSCT and BT critical habitat sites. The majority of these watersheds display evidence of nearby natural resource extraction. Logging, coal exploration and mining operations, gas wells, pipe and seismic lines, as well as all of the road networks servicing these industries pose serious risks to the recovery of these imperiled fish. My trip with Dave helped me better understand the magnitude of these threats and their cumulative impacts near and in designated critical habitats.

According to Dave, Alberta hasn’t conducted environmental impact assessments



A section of Lynx Creek in Castle Provincial Park showing bank stabilization efforts along the right hand side of the image. Lynx Creek drains into the Carbondale River and is designated as containing critical habitat for pure strain WSCT.
PHOTO: © P. MEINTZER

to investigate the cumulative impacts of logging and associated linear disturbance (i.e., forestry roads) to fish and fish habitats. One of the major realizations that I had about the problems facing fish recovery during this trip was just how easy it was to access many of these critical habitat sites due to the number of roads that are present throughout the landscape. Not having traveled in rural Alberta for years, I was surprised at just how many creeks we were able to drive right up alongside or across, as I had naively expected many of these sites to be significantly more isolated from the footprint of human development. This certainly was not the case. SARA recovery strategies recognize these streams as critical habitat for population recovery efforts. Yet roads and stream crossings often increase sediment loads within these streams during the spring thaw and rainfall events and compromise what little habitat remains for these fish. This is why it is important to prevent human activities both within and near critical habitat.

Another major issue Dave sees as posing a threat to trout recovery efforts is that some recovery efforts seem to be misplaced or misguided, despite their best intention. At one location where the Forestry Trunk Road crosses Speers Creek a new bridge was constructed with a rock feature below. This rock feature – essentially a manufactured waterfall – replaced a hanging culvert which was previously below the bridge. The culvert limited the passage of hybrid cutthroats upstream into WSCT critical habitat. However, this new rock barrier does not appear to be as tall as would be required to prevent fish from migrating to the upper reaches of Speers Creek – especially during times of greater runoff. The few remaining populations of pure strain trout need their critical habitats protected from introduced species to avoid competition and hybridization which was listed as a threat in the federal recovery strategies for BT, ART, and WSCT. This reconstruction is an example of a recovery effort that doesn't seem to help to recover pure strain WSCT.

We witnessed a second example of poorly implemented recovery efforts at a section of

O'Hagan Creek. From Dave's previous experience with this watershed, he had noted this creek has very limited flow even during seasons with increased runoff. The site offered examples of extensive stabilization and habitat construction efforts along the bank, features designed to create artificial habitat and prevent bank erosion. But they are not needed in a stream with such limited flow and would be much better suited to other critical habitat sites than at O'Hagan Creek. Transplanting such large boulders and trees into this area likely requires a great amount of time and money and Dave is concerned this money could be spent more wisely with proper planning and consultation with experts to ensure that recovery efforts actually serve to benefit at-risk trout populations.

My trip with Dave highlighted the urgent need to better understand the cumulative effects of industrial development on fish populations along Alberta's Eastern Slopes. For recovery efforts to be successful, we need to understand the magnitude of the risk posed by our existing human footprint on the landscape and ideally prevent any further degradation in or near trout critical habitats. If the recovery of at-risk species is truly a priority for governments at both the federal and provincial levels, then a rigorous investigation into cumulative effects should be implemented as soon as possible. Recovery efforts – such as those we observed during our trip – need to be better planned in consultation with experts. We don't have the money or time to waste. ▲



One of many tributaries containing WSCT critical habitat along the Atlas Road which passes west of Crowsnest Mountain connecting Coleman to Highway 40. The Atlas road is primarily used for logging and offroad vehicles and crosses numerous creeks along its length. PHOTO: © P. MEINTZER