Wolves in Yellowstone National Park

Keystone species are species who impact more organisms, in either a positive or negative way, than many other species (Mouquet, Gravel, Massol, & Calcagno, 2012). Because of their impact, they are very important for their respective communities (Mouquet, Gravel, Massol, & Calcagno, 2012). One example of such species are the wolves in Yellowstone National Park. Wolves were a predator to elk and so wherever their presence was greater, elk would travel to less (Fortin, Beyer, Boyce, Smith, Duchesne, & Mao, 2005). However, due to hunting, the wolf population disappeared which allowed the elk to roam freely (Fortin, Beyer, Boyce, Smith, Duchesne, & Mao, 2005). The elk now unrestricted, were able to eat greater amounts in one area as opposed to grazing over a large area to avoid wolves (Fortin, Beyer, Boyce, Smith, Duchesne, & Mao, 2005). This directly harmed the population of aspen trees and cottonwood trees which in turn harmed other species, like beavers and bison, who used those trees (Fortin, Beyer, Boyce, Smith, Duchesne, & Mao, 2005; Ripple, & Beschta, 2012). The reintroduction of wolves into the Yellowstone National Park ecosystem allowed for these effects to be reversed as the wolves hunted the elk again causing their behavior to revert to grazing over large areas to avoid the wolves again (Ripple, & Beschta, 2012). This allowed for the aspen and cottonwood tree populations to rise along with beaver and bison populations (Ripple, & Beschta, 2012).

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