Yellowstone as a mixing bowl
By Larry Hyslop


A faceoff between Yellowstone wolves and a grizzly bear

Yellowstone National Park seems like a giant mixing bowl, with park managers and scientists adding and changing ingredients, then stirring the bowl and studying the swirling brew to see how the changes affect the other parts of the mixture. This is especially evident in the park's populations of aspens, willows, elk, wolves and grizzly bears.

In 1968, park managers stopped culling the elk herds in the northern part of Yellowstone. After that, elk numbers increased to a 1992 high of an estimated 20,000 elk. Grizzlies in the Greater Yellowstone Ecosystem suffered a population drop to perhaps as low as 185 bears in the 1970s. Following changes in bear management, their numbers have rebounded to over 600 bears at the present. Meanwhile, along with the rise in elk numbers, the number and size of willow and aspen stands has dropped precipitously.

The biggest change to the mixing bowl came with the re-introduction of wolves in 1995. Since then, elk numbers have dropped by 60% to 3,900 elk, apparently due to both wolf predation and the current drought. Wolf numbers built to a high in 2007, but have since dropped by 60% to 2012's 98 wolves living in ten packs, apparently due to fewer elk and disease. The packs in the park's interior have dropped less than the packs along the northern edge, apparently because interior wolves rely more on bison and less on elk.

Amidst all of this swirling mixture, the clear winner in terms of population has been grizzly bears, who continue to increase in numbers. It helps that wolves are providing meat for bears and it is estimated that 80% of wolf kills are seized by bears. In a video watched last fall in West Yellowstone, a grizzly bear casually followed a wolf pack, obviously waiting for the wolves to make a kill so that the bear could then take it away. Wolves may be more agile and able to harass a bear, but the powerful bear usually wins possession of an elk or bison carcass.

Bears do not often kill adult elk but they do kill three times as many elk calves each spring as wolves. It could be increasing bear numbers are also helping suppress the elk population. It is not thought, however, that bear numbers are influencing wolf numbers.

A recent study pointed out that bear scat contains double the amount of berry remains as scat

did a few years ago. The reason seems to be fewer elk are eating fewer berry bushes, therefore providing more berries to bears each fall, at a time when bears need to pack on the pounds in preparation for winter's hibernation.

During the re-introduction of wolves into Yellowstone, there was talk of why this country had so few beavers. The huge elk population was eating the young aspen and willow shoots, and starving out any beavers. Wolves would create a "landscape of fear" forcing elk to move around more and reduce the pressure on aspen and willow stands.

Recent studies have found, however, that the aspen and willow stands are still not recovering. While wolves are eating elk, they are not forcing elk to change their browsing habits. Now it is thought the park's wildfire suppression strategies are also limiting new aspen and willow growth and further steps will need to be taken to increase aspen and willow stands.

The stirring of this beautiful bowl goes on and only time will tell what happens next in this swirling mixture of willow, aspen, elk, wolves and bears.

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