



ZION NATIONAL PARK
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TOC

Most people come to a National Park with the expectation that they are witnessing a landscape that is the same as it has always been. Unfortunately, not only is that impossible (simply because wildlands change all the time), but it is so far from true as to constitute a massive fraud on the public. As you see and read these picture books, perhaps you will be as outraged as I am at the scale of the mess that has become “Our National Parks.”



This is cheat grass (*Bromus tectorum*), a non-native winter annual that provides very poor forage. Cheat displaces native grasses because it germinates very early and dries out the soil such that its competitors die for lack of moisture. The dark shrub is Ephedra (*E. nevadensis*,). The lime green shrubs, often with yellow flowers) are “rabbit brush” (*Chrysothamnus viscidiflorus*). Although both are native, they are relatively poor forage for wildlife. Note that some of the rabbit brush is dead from lack of soil moisture where the cheat is most dominant.



This is cheat grass, up close. Its roots exude hormones that preclude the germination of many annuals. Note that there is little diversity in the photo; it is a near monoculture. Notice how little leaf there is, making for very little food value compared to native perennials. The seed is on the large side and can be injurious to grazing animals.



This native perennial grass is dead. Very little grows around it. There are no animal tracks or any other sign of disturbance. This is not a matter of mineral composition or an unusual lack of rainfall. This is a result of mismanagement.



There are ungulate trails in the background, (probably deer), but they don't eat cheat unless they're starving (except in winter). They don't prefer rabbit bush either.



This is Arch Rock in Pine Creek Valley. Decadent dying gamble oak, juniper, and more cheat grass. As you shall see, compared to Canyonlands National Park, this is a virtual paradise.



It's not like there isn't any water in the area. This is the Virgin River running in mid August. The water is not being retained in the soil for local habitat; it is striking impermeable ground to run off to an agro-urban reservoir. In a healthy riparian corridor, there would be far more and younger cottonwood than you see here.



And, surprise, surprise, there is cheat here too. If the river flooded, how much erosion resistance would you get from grasses like this? Does it look like there is much for animals to eat?



Here, among the cheat, is “sand drop” (*Sporobolus cryptandrus*), a native grass. The native is bright green in Southern Utah in mid-August, so the problem is NOT high temperature or lack of rain. Note the wider leaves; this is a good forage grass. In a soil managed for nutrition, it will out compete the cheat. If it isn’t managed...



The cheat wins.



And the native perennials lose.
Note again the prevalence of bare mineral soil bereft of organic matter.



When the grasses aren't grazed, the thatch dries out the clump and deprives new blades of light. The lack of organic cover raises soil temperature and dries out the surface. The cheat dries out the upper sub-surface and adds allelopathic chemicals to the soil. The native bunch grass dies.



Here is a native perennial seedling nearby (probably needle grass). There is no thatch and little cheat. It's doing just fine.



Believe it or not, this represents the goal of the Park Service. These are “**cryptogamic crusts,**” similar to a type of lichen. As you can see, almost nothing grows in this stuff, even cheat.



According to the US Geological Survey, these crusts now cover 85% of the Park.*
But is it really a bad thing? Aren't these crusts "Natural"?

*Source is detailed as an end note to this picture book.



More crusts, with impoverished cheat grass as the dominant vegetation (there are a couple of sand drop seedlings that probably won't make it). The Park Service claims that cryptogamic crusts, "preserve moisture." The problem with the crust is that rain doesn't penetrate it either. Instead, it runs off until the flow cuts through. Then you get a rill which turns into a gully, the walls of which are subject to collapse. They'll also tell you "it prevents erosion."



Oops! Where are we? Well, this is grazing land just outside Zion National Park. Same day, same geology, different management. People did this, using cattle. Where is all that erosion they were worried about? This place is just as dry as the Park, if not more so, because Zion has so much area of sandstone and crust to collect water that will run off to supply soils where there should be vegetation, but isn't.



This abundant grazed needle grass shields the soil from the impact of rainfall and retains soil particles better than cryptogamic crusts. The grass also aids rainwater absorption and retention instead of running off with a load of silt cutting gullies through bare ground along the way. If you look carefully, there are forbs here too.



Now that this native grass has dropped seed, it's ready for grazing. Just think: the ranchers are making food for you and for wildlife in the deal, so long as you let them. Their lives depend upon the outcome of their management decisions. If their livelihood depended upon wildlife, it would be even better.



Did you see wildflowers in the Park?
They are abundant here, not only as nutritious forage for cattle, but for wild animals and insects as well.



Note that not only is there rabbit brush, and oak, but healthy sage is also present *because* it is browsed. Animal foraging prevents sage from becoming woody and decadent. And you probably thought this region was a desert!



Well, if the current management regulates the ranchers out of business, it soon will be, just like the Park.



THIS IS WHAT ZION COULD BE, EASILY.
IT COULD EVEN MAKE A PROFIT.

SO, WHICH DO YOU WANT:

PRIVATE, OR “PUBLIC”?
MANAGED, OR “NATURAL”?

YOU MAY NOT HAVE THAT CHOICE FOR LONG

OVER A FIFTH OF THE PARK
IS NOW CLOSED TO THE PUBLIC

National Park Service policy is made in Washington DC. How can they truly understand the facts on location? Park “managers” are insulated from accountability with virtual lifetime employment (unless the system collapses).

Ranchers have a personal life-or-death stake in the health of the land.

Based upon these photos, which environmental management service would you prefer to hire?

- [1] **Source on Cryptogamic Crust Coverage:** Cogan, Dan; et al. Technical Memorandum 8260-03-01, *Zion National Park, 1999-2003 VEGETATION MAPPING PROJECT*, U.S. Geological Survey, Center for Biological Informatics, Remote Sensing and GIS Group, Technical Service Center, Bureau of Reclamation, Denver, Colorado, p A-259, “Zion National Park Vegetation: Cryptogamic crust constitutes 85% of the ground cover.”

This source was not easy to find and moved while in publication. The current location is not externally searchable, so one must figure out where they’ve put this type of data, now at: <http://biology.usgs.gov/npsveg/zion/zionrpt.pdf>



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