

# Biodiversity for our national parks



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*Note: please find remaining graphs in notebook file*



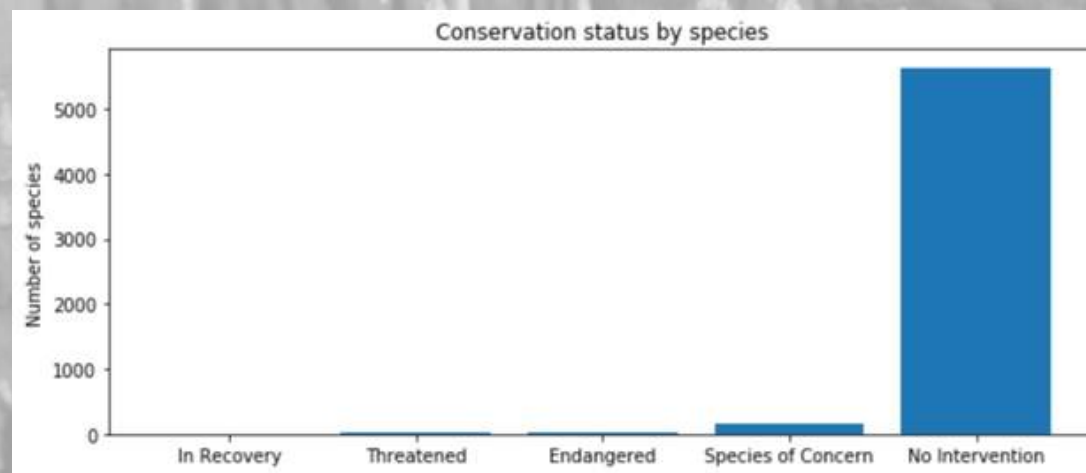
# data and findings

**Species:** mammal, bird, reptile, amphibian, fish, vascular plant and non-vascular plant

**Conservation status:** species of concern, threatened, endangered and in recovery

## Comments: the good news

97 % of the species in our national parks have no conservation status, ie they are not considered endangered in any way. Only about 0,5 % of species are classified as "threatened" or "endangered".



# endangered species by category

As we can see from the table below, mammals and birds are the species most likely to be endangered.

category	not_protected	protected	percent_protected
Amphibian	72	7	0.09
Bird	413	75	0.15
Fish	115	11	0.09
Mammal	146	30	0.17
Nonvascular Plant	328	5	0.02
Reptile	73	5	0.06
Vascular Plant	4216	46	0.01

We ran a significance test to see whether or not mammals were significantly more likely to be endangered than birds, but this turned out not to be the case. We performed the same test between mammals and reptiles and in this case we found mammals were significantly more likely to be endangered.





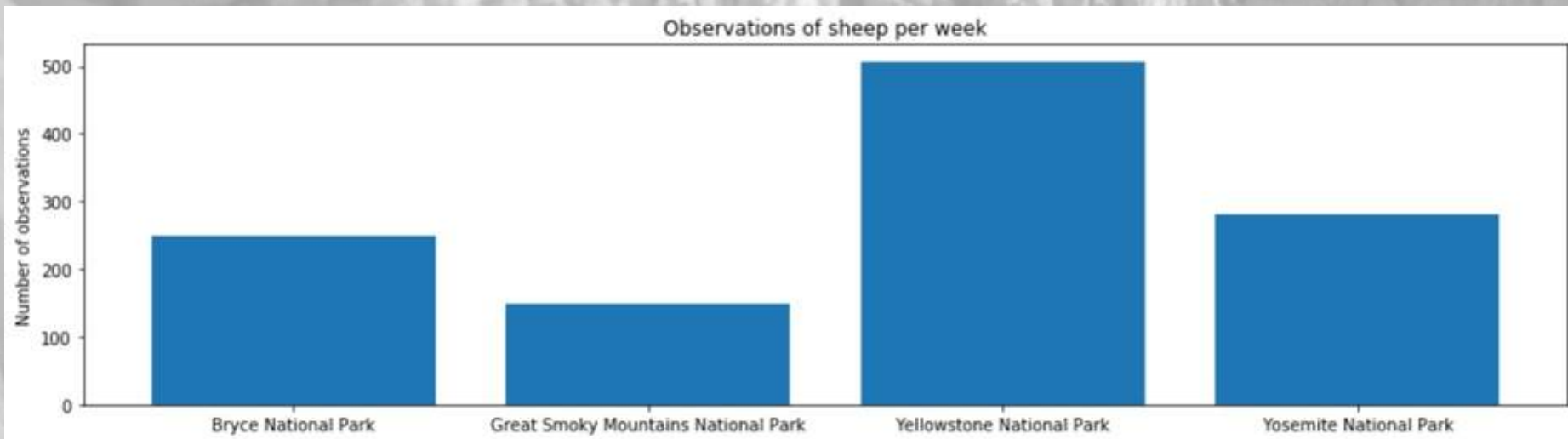
# sheep observations

Below is table of sheep observations by name, park and observation status.

	scientific_name	park_name	observations	category	common_names	conservation_status	is_protected	is_sheep
0	Ovis canadensis	Yellowstone National Park	219	Mammal	Bighorn Sheep, Bighorn Sheep	Species of Concern	True	True
1	Ovis canadensis	Bryce National Park	109	Mammal	Bighorn Sheep, Bighorn Sheep	Species of Concern	True	True
2	Ovis canadensis	Yosemite National Park	117	Mammal	Bighorn Sheep, Bighorn Sheep	Species of Concern	True	True
3	Ovis canadensis	Great Smoky Mountains National Park	48	Mammal	Bighorn Sheep, Bighorn Sheep	Species of Concern	True	True
4	Ovis canadensis sierrae	Yellowstone National Park	67	Mammal	Sierra Nevada Bighorn Sheep	Endangered	True	True
5	Ovis canadensis sierrae	Yosemite National Park	39	Mammal	Sierra Nevada Bighorn Sheep	Endangered	True	True
6	Ovis canadensis sierrae	Bryce National Park	22	Mammal	Sierra Nevada Bighorn Sheep	Endangered	True	True
7	Ovis canadensis sierrae	Great Smoky Mountains National Park	25	Mammal	Sierra Nevada Bighorn Sheep	Endangered	True	True
8	Ovis aries	Yosemite National Park	126	Mammal	Domestic Sheep, Mouflon, Red Sheep, Sheep (Feral)	No Intervention	False	True
9	Ovis aries	Great Smoky Mountains National Park	76	Mammal	Domestic Sheep, Mouflon, Red Sheep, Sheep (Feral)	No Intervention	False	True
10	Ovis aries	Bryce National Park	119	Mammal	Domestic Sheep, Mouflon, Red Sheep, Sheep (Feral)	No Intervention	False	True
11	Ovis aries	Yellowstone National Park	221	Mammal	Domestic Sheep, Mouflon, Red Sheep, Sheep (Feral)	No Intervention	False	True

# sheep observations by park

This is an overview of sheep observations by park.



park_name	observations
Bryce National Park	250
Great Smoky Mountains National Park	149
Yellowstone National Park	507
Yosemite National Park	282



# observation needed for FMD programme

In order to be able to see the effect of the programme for reducing foot-and-mouth disease we wanted to calculate the amount of time needed for observation. In order to do this we established the Minimum Detectable Effect (MDE) at 33 % of the baseline. On the basis of this and the number of previous observation in each park, we concluded that scientists would need two weeks to observe in Bryce National Park and 1 week in Yellowstone National Park.

**Yellowstone National Park**



**Bryce National Park**

