|  |  |  |
| --- | --- | --- |
| GBIF dataset | Survey protocol | Total occurrences |
| eBird | Citizen Science | 22,033 |
| iNaturalist | Citizen Science | 2,070 |
| Avian Knowledge Network – Point Blue Conservation Science | Standard survey | 45 |
| Great Backyard Bird Count | Citizen Science | 38 |
| Xeno-canto | Citizen science | 27 |
| eButterfly | Citizen science | 7 |
| The Cornell Lab of Ornithology – Macaulay Library | Citizen science | 6 |
| Observation.org | Citizen Science | 5 |
| The Lepidopterists’ Society | Citizen Science | 4 |
| Naturgucker.de | Citizen Science | 3 |
| Barcode of Life Data System | Survey method unknown | 1 |

|  |  |
| --- | --- |
| Taxon | Total occurrences |
| Aves | 22,569 |
| Mammalia | 771 |
| Reptilia | 742 |
| Insecta | 125 |
| Actinopterygii | 21 |
| Amphibia | 10 |
| Branchiopoda | 1 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Burn Treatment | desert | Total area (km2) | Total Occurrences Reported 2000-2020 | total Occurances Reported per 1000 km2 |
| Never-burned  (control) | Mojave | 73161 | 8374 | 114 |
| Sonoran | 26537 | 6683 | 252 |
| San Joaquin | 27789 | 8843 | 318 |
| Burned | Mojave | 722 | 154 | 213 |
| Sonoran | 399 | 67 | 168 |
| San Joaquin | 219 | 118 | 539 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model term | edf | Ref edf | F statistic | *p*-value |
| f(Year):Mojave | 2.3 | 2.9 | 48.39 | <2e-16\*\*\* |
| f(Year):San Joaquin | 3.4 | 4.2 | 50.50 | <2e-16\*\*\* |
| f(Year):Sonoran | 1 | 1 | 154.73 | <2e-16\*\*\* |
| f(NDVI) | 1 | 1 | 10.7 | 0.00142\*\* |
| **Intercept Coefficient:** 1.31 ± 0.24 | | | | |
| **Adjusted r2:** 0.714 | | | | |
| **Deviance explained:** 84.6% | | | | |
| **Significance codes:** \*\*\*0, \*\*0.001 | | | | |

gam(stzd\_totalObs ~ s(obsYear, by = desert) + s(ndvi) + desert + treatmentGroup, family = tw(link = "log"), data = data, method = "REML")

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| VARIABLE | df |  | F statistic | *p*-value |
| Desert | 2 |  | 761.57 | <2e-16\*\*\* |
| Treatment Group | 1 |  | 194.09 | <2e-16\*\*\* |
| Desert x Treatment Group | 2 |  | 83.94 | <2e-16\*\*\* |
| Residuals | 107 |  |  |  |
| **Significance codes:** \*\*\*0 | | | | |

aov(ndvi ~ desert\*treatmentGroup