NCEAS-Training

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#Loading packages and data sets

head(cnddb)

## ï..FID SNAME CNAME ELMCODE OCCNUMBER  
## 1 0 Gopherus agassizii desert tortoise ARAAF01012 1  
## 2 1 Gopherus agassizii desert tortoise ARAAF01012 3  
## 3 2 Gopherus agassizii desert tortoise ARAAF01012 4  
## 4 3 Ovis canadensis nelsoni desert bighorn sheep AMALE04013 30  
## 5 4 Ovis canadensis nelsoni desert bighorn sheep AMALE04013 23  
## 6 5 Cylindropuntia munzii Munz's cholla PDCAC0D0V0 3  
## MAPNDX EONDX KEYQUAD KQUADNAME KEYCOUNTY PARTS ELMTYPE  
## 1 03129 14806 3511714 The Buttes SBD 1 2  
## 2 06474 14804 3411468 Stepladder Mts. NW SBD 1 2  
## 3 06371 14803 3311534 Iris Wash IMP 1 2  
## 4 03721 14499 3611731 Wildrose Peak INY 1 2  
## 5 03255 14503 3611763 East of Sand Flat INY 1 2  
## 6 06387 12381 3311532 Pegleg Well IMP 1 1  
## TAXONGROUP EOCOUNT ACCURACY PRESENCE  
## 1 Reptiles 1 specific area Presumed Extant  
## 2 Reptiles 1 specific area Presumed Extant  
## 3 Reptiles 1 specific area Presumed Extant  
## 4 Mammals 1 specific area Presumed Extant  
## 5 Mammals 1 specific area Presumed Extant  
## 6 Dicots 1 nonspecific area Presumed Extant  
## OCCTYPE OCCRANK SENSITIVE SITEDATE ELMDATE  
## 1 Natural/Native occurrence Good N 20040412 20040412  
## 2 Natural/Native occurrence Good N 1987XXXX 1987XXXX  
## 3 Natural/Native occurrence Good N 1987XXXX 1987XXXX  
## 4 Natural/Native occurrence Unknown N 1986XXXX 1986XXXX  
## 5 Natural/Native occurrence Unknown N 1986XXXX 1986XXXX  
## 6 Natural/Native occurrence Unknown N 20170301 20170301  
## OWNERMGT FEDLIST CALLIST GRANK SRANK  
## 1 BLM, PVT, DFG, DOD, STATE Threatened Threatened G3 S2S3  
## 2 BLM, PVT, STATE Threatened Threatened G3 S2S3  
## 3 BLM, PVT, STATE, DOD-NAVY Threatened Threatened G3 S2S3  
## 4 NPS-DEATH VALLEY NP, BLM, PVT None None G4T4 S3  
## 5 NPS-DEATH VALLEY NP None None G4T4 S3  
## 6 DOD-NAVY, BLM-EL CENTRO RA None None G3 S1  
## RPLANTRANK CDFWSTATUS OTHRSTATUS  
## 1 IUCN\_VU  
## 2 IUCN\_VU  
## 3 IUCN\_VU  
## 4 FP BLM\_S; USFS\_S  
## 5 FP BLM\_S; USFS\_S  
## 6 1B.3 BLM\_S  
## LOCATION  
## 1 FREMONT-STODDARD; FREMONT VALLEY SOUTH TO THE VICINITY OF ADELANTO AND HWY 14 EAST TO CALICO MOUNTAINS, W MOJAVE DESERT.  
## 2 FENNER-CHEMEHUEVI; FROM PIUTE VALLEY SOUTH TO VIDAL VALLEY, EASTERN MOJAVE AND NORTHEASTERN COLORADO DESERTS.  
## 3 CHUCKWALLA; MILPITAS WASH, CHUCKWALLA VALLEY AND BENCH IN THE SOUTHERN COLORADO DESERT.  
## 4 PANAMINT MOUNTAINS, FROM TOWNE PASS SOUTH TO PLEASANT CANYON.  
## 5 COTTONWOOD MOUNTAINS OF PANAMINT RANGE, NORTH OF TOWNE PASS.  
## 6 CHOCOLATE MOUNTAIN AERIAL GUNNERY RANGE; AREA WEST OF IRIS WASH AND SOUTH OF CHUCKWALLA MOUNTAINS, CHOCOLATE MOUNTAINS.  
## LOCDETAILS  
## 1 LARGEST OF 4 PRIMARY POPS IN CALIF. IN 1977, ESTIMATED DENSITIES WERE 20 TO >250 TORTOISES/SQ MI. AS OF 1987, EVIDENCE SUGGESTS MAJOR DECLINES IN ESTIMATED DENSITY IN MOST AREAS.  
## 2 1 OF 4 PRIMARY POPS IN CALIF. IN 1977, EST DENSITIES WERE 20-250 TORTOISES/SQ MI.  
## 3 1 OF 4 PRIMARY POPS IN CALIF. IN 1977, EST DENSITIES WERE 20 TO 250 TORTOISES/SQ MI.  
## 4 PART OF A LARGE RANGE THAT INCLUDES THE ENTIRE PANAMINT RANGE; POPULATION ESTIMATE FOR THE ENTIRE RANGE IS 144 INDIVIDUALS.  
## 5 DECLINE SINCE 1972 IN THE DEATH VALLEY AREA.  
## 6 MAPPED ACCORDING TO A 1983 BERRY REPORT MAP AND TRS GIVEN IN 1984 KOBALY/YORK PHONE CONVERSATION. 1983 MAP INDICATED A DISTRIBUTION OVER A LARGE PORTION OF THE CHOCOLATE MOUNTAIN AERIAL GUNNERY RANGE. NEED MAP DETAIL FOR AREA.  
## ECOLOGICAL  
## 1 AREA COVERS APPROX. 1700 SQ MILES, FROM 2000 TO >4000 FT ELEV W/SEVERAL VEG COMMUNITIES INCLUDED.  
## 2 AREA COVERS APPROX 1560 SQ MI FROM 1000-3000 FT ELEV. VEGETATION COMMUNITIES INCLUDE CREOSOTE WITH YUCCA AND OCOTILLO TO SONORAN WITH WOODLAND WASHES IN SOUTH.  
## 3 AREA COVERS APPROX 500 SQ MI FROM 500 TO 2000 FT ELEV WITH VARIOUS VEGETATION COMMUNITIES. BLM ACEC INCLUDED.  
## 4   
## 5   
## 6 OBSERVED OVER LARGE AREA OF CHOCOLATE MOUNTAINS AERIAL GUNNERY RANGE AND ADJACENT BLM LAND ON WASHES AND RIDGES IN CREOSOTE SCRUB. ASSOCIATED WITH LARREA TRIDENTATA, HILARIA RIGIDA, AMBROSIA DUMOSA, EPHEDRA CALIFORNICA, ETC.  
## THREAT  
## 1 INCREASING HUMAN DISTURBANCE, GRAZING, DEVELOPMENT AND HABITAT FRAGMENTATION.  
## 2 PROPOSED DEVELOPMENT, HUMAN USE, GRAZING, RAVEN PREDATION AND HABITAT FRAGMENTATION.  
## 3 INCREASING OFF-ROAD TRAVEL AND PROPOSED PRISON ARE THREATS. OVERALL, THIS AREA HAS RELATIVELY LITTLE HUMAN DISTURBANCE.  
## 4 EXTENSIVE BURRO PROBLEM THROUGHOUT THE RANGE.  
## 5 BURROS OCCUR IN SHEEP RANGE, ESPECIALLY DODD SPRINGS AREA.  
## 6 SOME COLONIES ARE THREATENED BY MILITARY ACTIVITIES.  
## GENERAL  
## 1   
## 2   
## 3   
## 4 POPULATION DECLINE SINCE 1972, BUT STABLE NOW.  
## 5 POPULATION ESTIMATE OF 105 INDIVIDUALS.  
## 6 20-30 PLANTS SEEN IN T8S R16E SECS 23-26 IN 1984, AND MENTIONED AS "SCATTERED" OVER OTHER TRS SURVEYED IN THE N CORNER OF POLY. MANY PLANTS WERE SEEN NEAR INDIAN WELL IN 1998. INCLUDES OBSERVATIONS FROM 2004, 2011, 2012, 2013, 2016, & 2017.  
## AREA PERIMETER AVLCODE Symbology  
## 1 7210000463 631699.7 20201 202  
## 2 5146206774 432285.9 20201 202  
## 3 2573612951 445261.4 20201 202  
## 4 1194009673 246271.8 20201 202  
## 5 950521457 205009.5 20201 202  
## 6 788695077 237799.5 10301 103

head(OR\_nat\_heritage)

## ï..FID EO\_ID SHAPE\_ID ELCODE EO\_NUM G\_RANK S\_RANK  
## 1 0 15 1696 AFCHA0502M 49 G5T4 S2  
## 2 1 16 1697 ABNSB12011 2091 G3G4T3 S1S2  
## 3 2 17 1698 ABNSB12011 2101 G3G4T3 S1S2  
## 4 3 19 1700 ABNSB12011 1046 G3G4T3 S1S2  
## 5 4 20 1701 PMLIL0V090 47 G3G4 S3  
## 6 5 21 1702 ABNSB12011 125 G3G4T3 S1S2  
## SCI\_NAME COM\_NAME  
## 1 Salvelinus confluentus pop. 25 Bull trout (Upper Snake Recovery Unit)  
## 2 Strix occidentalis caurina Northern spotted owl  
## 3 Strix occidentalis caurina Northern spotted owl  
## 4 Strix occidentalis caurina Northern spotted owl  
## 5 Fritillaria glauca Siskiyou fritillaria  
## 6 Strix occidentalis caurina Northern spotted owl  
## EOCODE CATEGORY FED\_STAT STATE\_STAT LIST TRACK  
## 1 AFCHA0502M.49 Vertebrate Animal LT SC 1 Y  
## 2 ABNSB12011.2091 Vertebrate Animal LT LT 1 Y  
## 3 ABNSB12011.2101 Vertebrate Animal LT LT 1 Y  
## 4 ABNSB12011.1046 Vertebrate Animal LT LT 1 Y  
## 5 PMLIL0V090.47 Vascular Plant 4 W  
## 6 ABNSB12011.125 Vertebrate Animal LT LT 1 Y  
## EO\_RANK RANK\_COM ID\_CONF  
## 1 H - Historical   
## 2 E - Verified extant (viability not assessed)   
## 3 E - Verified extant (viability not assessed)   
## 4 H - Historical   
## 5   
## 6 E - Verified extant (viability not assessed)   
## EO\_TYPE FEATURES REP\_ACCY FIRST\_OBS  
## 1 YEAR-ROUND - fish Line, Linear (1) High 1964  
## 2 Point, Estimated 100 M (1) Medium 1989  
## 3 Point, Estimated 100 M (1) Medium 1989  
## 4 Point, Estimated 400 M (1) Medium 1979  
## 5 Point, Estimated 50 M (1) High 1992-05-11  
## 6 Point, Estimated 400 M (1) Medium 1978  
## LAST\_OBS  
## 1 1964  
## 2 2003  
## 3 2003  
## 4 1979-07-25  
## 5 1992-05-11  
## 6 1996-07-11  
## DIRECTIONS  
## 1 BOSONBERG CREEK  
## 2 W OF STINGER CREEK.  
## 3 3.75 MI S.S.W. OF IRON MTN.  
## 4 S. OF BUCK BASIN BURN.  
## 5 HUNGRY HILL. TAKE RD 4201 TO BABYFOOT LAKE PARKING AREA; APPROXIMATELY 13 MIILES FROM HWY 199. CONT. .3 MI., FOLLOW FLAGGING DOWNSLOPE 100-150 FT TO SURVEY AREA.  
## 6 DAVIS MOUNTAIN  
## SURVEYSITE LATITUDE LONGITUDE  
## 1 BOSONBERG CREEK 441052N 1183607W  
## 2 STINGER GULCH (MSNO-2091 & 2091A) 430041N 1231044W  
## 3 CALF CREEK (MSNO-2101, 2101A & 2101B) 425204N 1233217W  
## 4 UPPER LITTLEMITE CR 425215N 1223419W  
## 5 421325N 1234728W  
## 6 DAVIS MOUNTAIN 433635N 1214623W  
## POP\_DATA  
## 1 2008: Classified as previous/historic by ODFW. 1964: ODFW CREEL REPORTS SHOW BULL TROUT IN BOSENBURG CREEK IN 1957 &amp 1964. ODFW BULL TROUT DISTRIBUTION MAPS USED TO CREATE THE 1:24,000 COVERAGE.  
## 2 SPOTTED OWL HABITAT AREA, SEE ANNOBS.  
## 3 SPOTTED OWL HABITAT AREA, SEE ANNOBS and Sources.  
## 4 SPOTTED OWL HABITAT AREA  
## 5 95 PLANTS; SCATTERED IN 20x30 FT. AREA. 98% VEGETATIVE, 2% FLOWERING  
## 6 SPOTTED OWL HABITAT AREA. SEE ANNOBS.  
## ANNOBS  
## 1   
## 2 2003 - 2 owls seen, 1 pair; 2002 - 4 owls seen, 1 pair and 2 juveniles; 2001 - 4 owls seen, 1 pair and 2 juveniles; 2000 - 2 owls seen, 1 pair; 1999 - 0 OWLS SEEN; 1998 - 1 MALE SEEN DURING 1 VISIT ONLY; 1997 - 0 OWLS SEEN; 1996 - 4 OWLS SEEN 1 PAIR AND  
## 3 2003 - 2 owls seen, 1 pair; 2002 - 2 owls seen, 1 pair; 2001 - 3 owls seen, 1 pair and 1 male; 2000 - 3 owls seen, 1 pair and 1 juvenile; 1999 - 2 OWLS SEEN 1 PAIR; 1998 - 4 OWLS SEEN 1 PAIR AND 2 JUVENILES; 1997 - 1 MALE SEEN; 1996 - 0 OWLS SEEN; 1995 -  
## 4 1998 - 2 OWLS SEEN 1 PAIR; 1979 - 2 OWLS SEEN 1 PAIR  
## 5   
## 6 1996 - 4 OWLS SEEN, 1 PAIR, 2 JUVENILES; 1995 - 3 OWLS SEEN, 1 PAIR, 1 JUVENILE; 1994 - 4 OWLS SEEN, 1 PAIR, 2 JUVENILES; 1993 - 0 OWLS SEEN; 1992 - 0 OWLS SEEN; 1991 - 0 OWLS SEEN; 1990 - 1 MALE SEEN; 1988 - 4 OWLS SEEN, 1 PAIR AND 2 JUVENILES; 1987 - 2  
## HAB\_DESC  
## 1   
## 2   
## 3   
## 4 SW OREGON MIXED CONIFER FOREST. OLD-GROWTH (&gt;200 YRS). UNLOGGED.  
## 5 TALUS SLOPE; CONVEX MICROTOPOGRAPHY. ASSOC. sp.: OVERSTORY LAYER OF MSME, PIBR, 2% COVER. UNDERSTORY LAYER OF ABCO, PIBR, PSME 4% COVER. SHRUB LAYER OF QUVA LIGHT COVER. HERB LAYER OF DETE, Allium sp., ASDE, LOMA, ERFO, PERU, Sedum sp. (LARGE), Luina sp.  
## 6 INTERIOR GRAND FIR-DOUGLAS FIR. OLD-GROWTH-MATURE FOREST MIX. UNLOGGED.  
## MIN\_EL MAX\_EL ASPECT SLOPE COUNTY QUADCODE QUADNAME  
## 1 NA NA Grant 44118-B5 Logan Valley East  
## 2 1600 NA Douglas 43123-A2 Dodson Butte  
## 3 2500 NA Douglas 42123-G5 Rabbit Mountain  
## 4 3900 NA Jackson 42122-G5 Whetstone Point  
## 5 3800 NA NE58DEG Josephine 42123-B7 Josephine Mountain  
## 6 5450 NA Deschutes 43121-E7 Hamner Butte  
## PHYSPROV  
## 1 BM  
## 2 KM  
## 3 KM  
## 4 WC  
## 5 KM  
## 6 EC  
## TRS  
## 1 016S033E24 (RANGE=33.5E); 016S033E12 (RANGE=33.5E); 016S034E06; 015S035E31; 016S033E35 (RANGE=33.5E); 016S033E25 (RANGE=33.5E); 016S033E26 (RANGE=33.5E); 016S034E05; 016S033E01 (RANGE=33.5E); 016S033E13 (RANGE=33.5E)  
## 2 029S004W33  
## 3 031S007W21  
## 4 031S002E15  
## 5 038S009W32  
## 6 023S008E04  
## MA\_NAME  
## 1 MALHEUR NATIONAL FOREST; PRAIRIE CITY RANGER DISTRICT  
## 2 SOUTH RIVER RESOURCE AREA; ROSEBURG BLM DISTRICT  
## 3 SOUTH RIVER RESOURCE AREA; ROSEBURG BLM DISTRICT  
## 4 Rogue River National Forest; PROSPECT RANGER DISTRICT  
## 5 ILLINOIS VALLEY RANGER DISTRICT; Siskiyou National Forest  
## 6 DESCHUTES NATIONAL FOREST; CRESCENT RANGER DISTRICT  
## MA\_COM  
## 1   
## 2   
## 3   
## 4 AREA CLEARCUT OR THINNED, RELATIONSHIP TO NEST UNKNOWN-1979  
## 5 CANYON UNIT 18A PROJECT AREA  
## 6   
## PROT\_COM  
## 1   
## 2   
## 3   
## 4 UNRESTRICTED COMMERCIAL FOREST  
## 5   
## 6 UNRESTRICTED COMMERCIAL FOREST  
## MISC\_COM  
## 1 DISTRIBUTION INFORMATION USED IN THE EOR WAS DERIVED FROM ODFW GEOGRAPHIC RESOURCES DATA PRODUCED AND DISTRIBUTED IN 2001. THE ODFW BULL TROUT DISTRIBUTION WAS BASED ON SUMMER/FALL PRESENCE. WINTER DISTRIBUTION COULD VARY SIGNIFICANTLY. UNLESS SPECIFIC D  
## 2 MSNO = 2091 & 2091A  
## 3 1998 (06-02): From ODFW scientific takings permit annual report. Permit Holder: Frank Oliver, Roseburg BLM.<br>MSNO = 2101, 2101A & 2101B  
## 4   
## 5 2002 Siskiyou National Forest data transfer. 1992 FS SIGHTING REPORT; MARY BELL EXAMINER. PINK/YELLOWJACKET FLAGGING WAS PLACED AROUND POP. SITE AS WELL AS UPSLOPE TO ROADSIDE.  
## 6 MSNO = 125  
## SPECIMEN  
## 1   
## 2   
## 3   
## 4   
## 5   
## 6   
## SHORT\_REF  
## 1 Jones ; Hanson ; ODFW Stock Status Reports 1993; ODFW Bull Trout Summary Reports 1993; ODFW 2001; Hooten ; Buchanan ; ODFW  
## 2 BLM 2004; Oregon Department of Fish and Wildlife ; BLM spotted owl data base 2000; BLM spotted owl data base 1995  
## 3 BLM 2004; Oregon Department of Fish and Wildlife ; BLM spotted owl data base 2000; BLM spotted owl data base 1995; ODFW  
## 4 Forsman 1988  
## 5 Bell 1993  
## 6 Johnson ; ODFW 1996  
## CREATE\_DAT MOD\_DATE SHAPE\_Leng SHAPE\_Area  
## 1 2003-04-08 2017-12-11 90887.713 1342671.43  
## 2 1992-05-02 2017-12-11 2058.101 335989.13  
## 3 1992-05-02 2017-12-11 2058.097 335987.58  
## 4 1992-02-04 2017-12-11 8232.412 5375834.25  
## 5 1994-01-28 2017-12-12 1029.051 83997.26  
## 6 1992-02-07 2017-12-11 8232.412 5375834.24

## R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

summary(cars)

## speed dist   
## Min. : 4.0 Min. : 2.00   
## 1st Qu.:12.0 1st Qu.: 26.00   
## Median :15.0 Median : 36.00   
## Mean :15.4 Mean : 42.98   
## 3rd Qu.:19.0 3rd Qu.: 56.00   
## Max. :25.0 Max. :120.00

## Including Plots

You can also embed plots, for example:



Note that the echo = FALSE parameter was added to the code chunk to prevent printing of the R code that generated the plot.