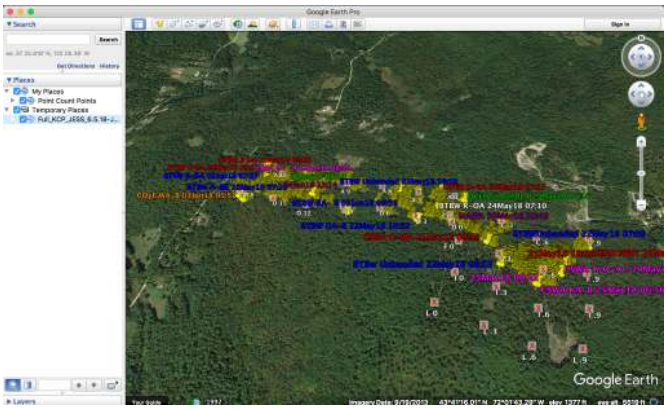
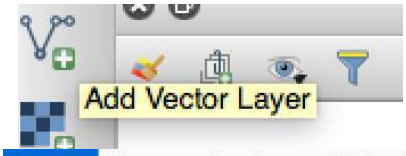


How to Query KML point data as CSV using QGIS and R

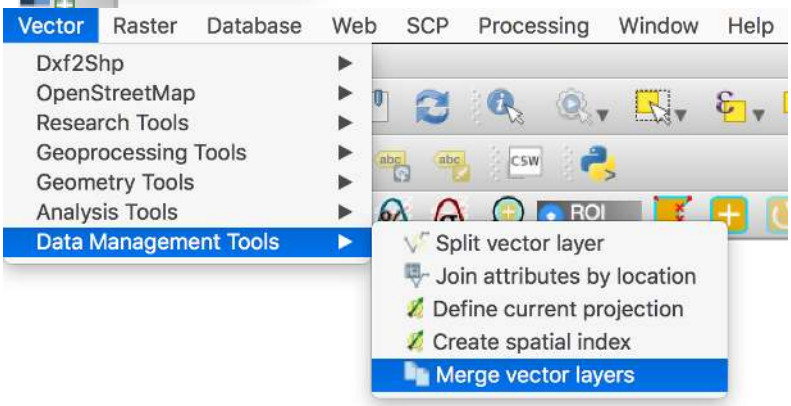
Here you can see more than 800 points, each describing an observation of an individual bird. This data is in the form of KML, a sort of XML document from Google for spatial data.

I want to know which points have “pair” or “female” in the description text nodes using R. This way, I can quickly make and update a .csv in Excel of only the paired birds (based on color bands).

Even if there was a description string search function in Google Earth Pro (or other organization-centric GIS/waypoint software), this method is more robust, as I can work immediately with the output as a data frame in R, rather than a list of results.

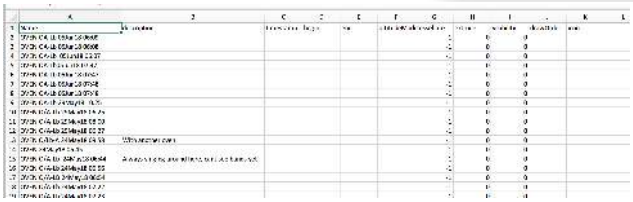


First, open an instance of QGIS. I am running ~2.8 on OSX. Add a vector layer of your KML. “Command-A” in the point dialog to select all before import!



Next, under “Vector”, select “Merge vector layers” via Data Management Tools.

Select CSV and elect to save the file instead of use a temporary/scratch file (this is a common error).



Open your csv in Excel for verification!

The R bit:

```
# query for paired birds
data <- data.frame(fread("Bird_CSV.csv"))
pair_rows <- contains("pair", vars = data$description)
fem_rows <- contains("fem", vars = data$description)
result <- combine(pair_rows, fem_rows)
result <- data[result,]
write_csv(result, "Paired_Birds.csv")
```

Tada!

	A	B	C
	Name	description	timesta
	BTBW OG?? 28May18 06:55	Paired	NA
	BTBW OG?? 28May18 06:55	Paired	NA
	UNBANDED BTBW 05Jun18 08:28	Paired w female	NA
	CSWA O-WA 30May18 08:19	Paired	NA
	CSWA Y/O-A 25May18 06:15	Paired	NA
	BTBW R-OA 24May18 06:59	With female paired	NA
	BTBW R-OA 24May18 06:57	Female chipping as pair	NA
	BTBW R-OA 24May18 06:58	With pair female	NA
)	BTBW R-OA 24May18 06:57	With pair female	NA
L	Coye Unbanded 25May18 06:41	Paired	NA
2	UNBANDED COYE 25May18 07:01	Likely paired, whisper singing, two individuals present	NA
3	UNBANDED COYE 25May18 06:43	Likely paired, whisper singing, two individuals present	NA
4	UNBANDED COYE 25May18 06:42	Likely paired, whisper singing, two individuals present	NA
5	UNBANDED COYE 25May18 06:41	Likely paired, whisper singing, two individuals present	NA
5	UNBANDED COYE 25May18 06:31	Likely paired, whisper singing, two individuals present	NA
7	UNBANDED COYE 25May18 06:27	Likely paired, whisper singing, two individuals present	NA
3	UNBANDED COYE 25May18 06:27	Likely paired, whisper singing, two individuals present	NA
9	BTBW RA-B 05Jun18 09:29	Singing later in day unpaired?	NA
)	BTBW YOAB 03Jun18 06:54	WITH FEMALE PAIRED	NA
L	BTBW YOAB 28May18 08:28	Paired!	NA
2	BTBW YOAB 28May18 08:27	Paired	NA
3	BTBW YOAB 28May18 08:28	PAIRED	NA
4	BTBW B-KA 25May18 07:29	Paired	NA
5	BTBW B-KA 25May18 07:29	Paired	NA
5	OVEN Lb/O-A 24May18 10:06	With female	NA
7	MAWA Unbanded 24May18 10:22	Singing no sign of female yet	NA
3	BTBW ? 23May18 09:01	With female	NA
9	BTBW ?23May18 09:00	Couldnt see bird with female	NA
)	BTBW BK-A 28May18 07:07	With female, whisper singing	NA
L	BTBW A-BK 28May18 07:13	With female did see an unbanded male come in	NA

-Jess