Data Density of Potential Insect Species

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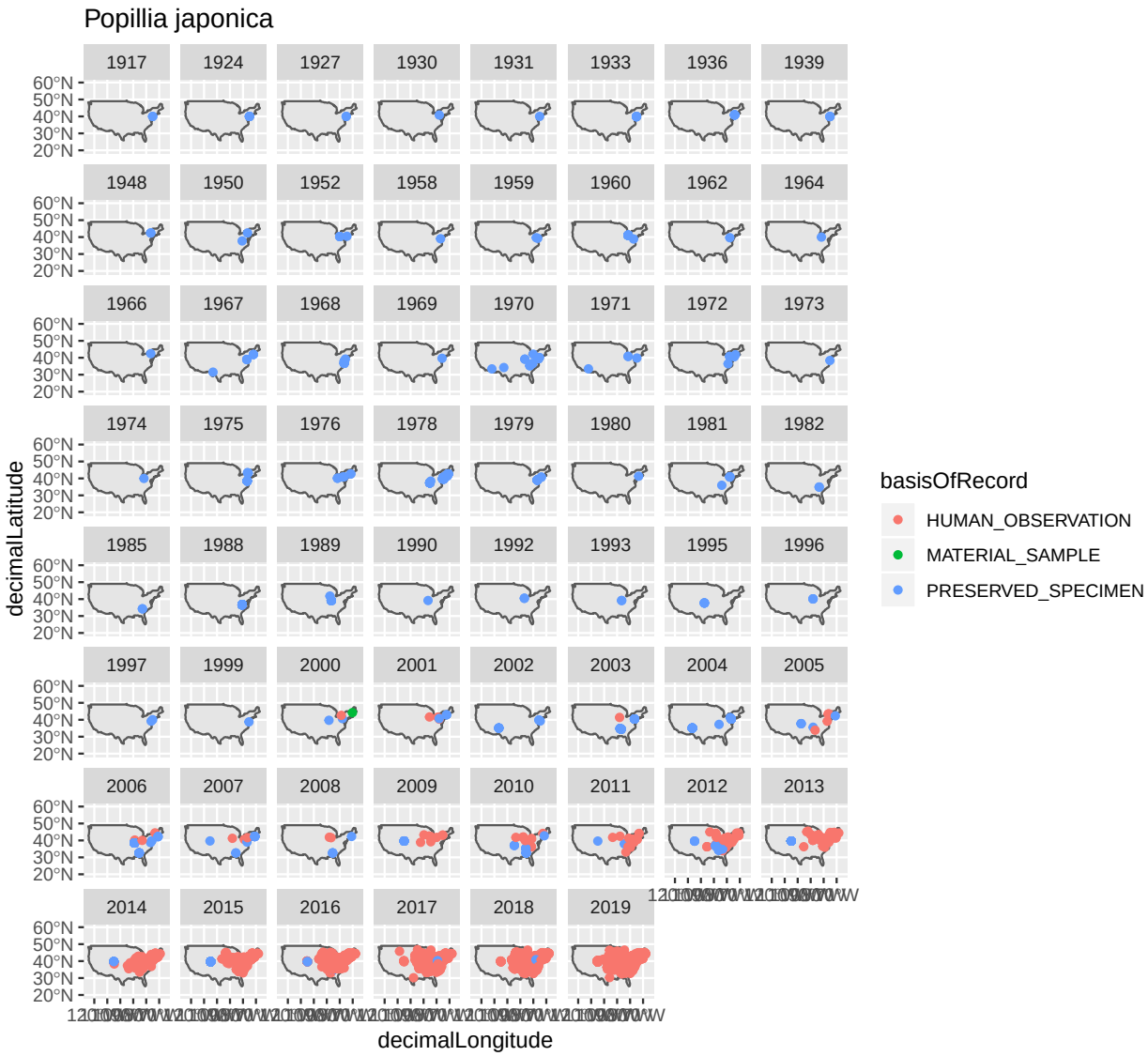
Data density of potential insects

For this initial exploration, I wrote a function that would map the observations and show the basisOfRecord for a species of choice through time. I also summarize the number of obsevations per basisOfRecord for each available year. The summary table only shows years with >= 10 observations per basisOfRecord.

Dung Beetles

Top species on iNat: Japanese Beetle - Popilia japonica

```
## # A tibble: 30 x 3
## # Groups:   year [24]
##     year basisOfRecord      count
##    <int> <chr>              <int>
##  1  1960 PRESERVED_SPECIMEN    16
##  2  1968 PRESERVED_SPECIMEN    11
##  3  1970 PRESERVED_SPECIMEN    22
##  4  1975 PRESERVED_SPECIMEN    18
##  5  1978 PRESERVED_SPECIMEN    47
##  6  1979 PRESERVED_SPECIMEN    18
##  7  1988 PRESERVED_SPECIMEN    40
##  8  1989 PRESERVED_SPECIMEN    12
##  9  2002 PRESERVED_SPECIMEN    10
## 10  2003 PRESERVED_SPECIMEN    33
## # ... with 20 more rows
```


Popillia japonica
1917
1924
1927
1930
1931
1933
1936
1939
1948
1950
1952
1958
1959
1960
1962
1964
1966
1967
1968
1969
1970
1971
1972
1973
1974
1975
1976
1978
1979
1980
1981
1982
1985
1988
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1990
1992
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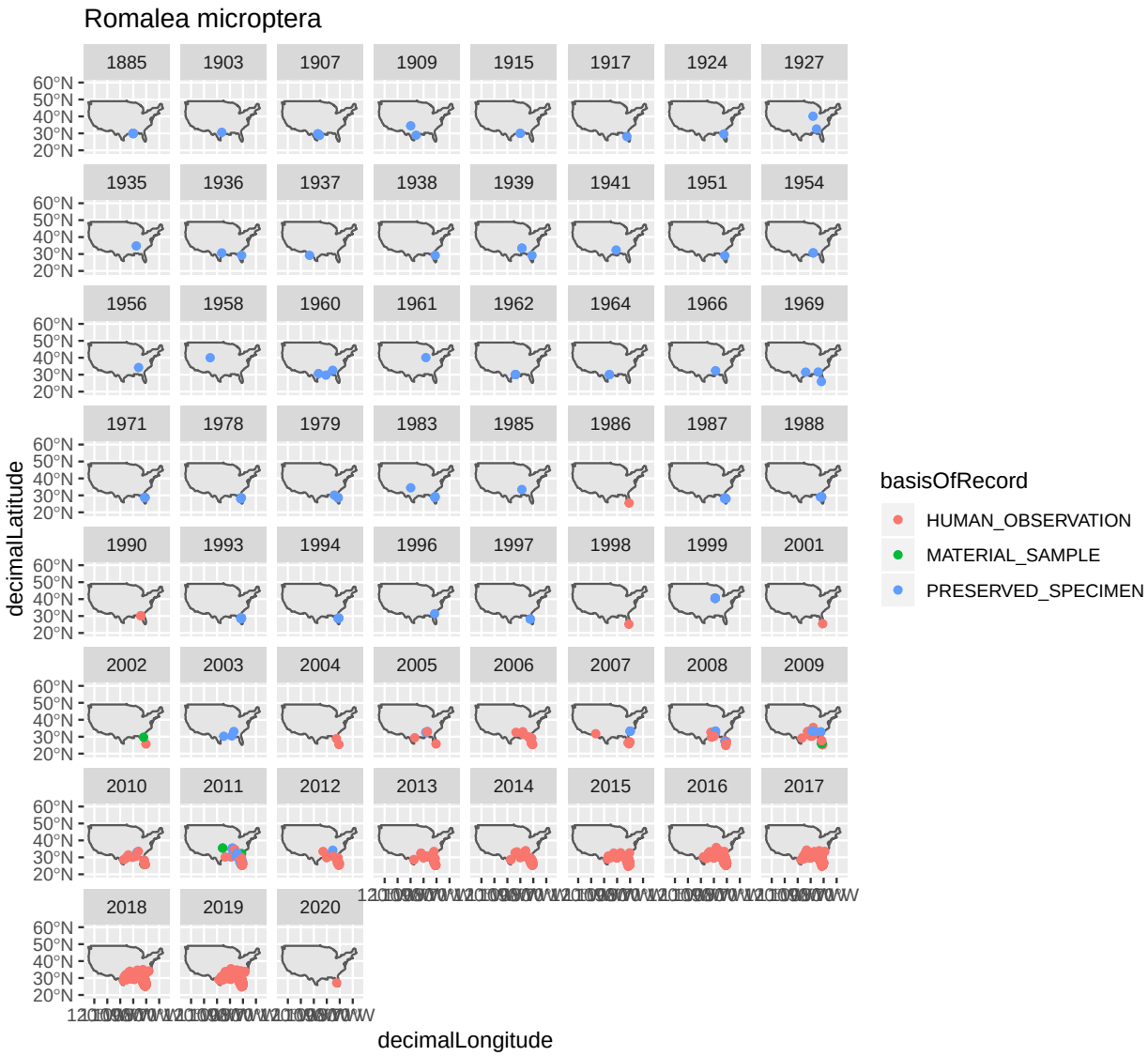
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
60°N
50°N
40°N
30°N
20°N
decimalLatitude
decimalLongitude
basisOfRecord
HUMAN_OBSERVATION
MATERIAL_SAMPLE
PRESERVED_SPECIMEN

Lubber Grasshoppers - Romaleidae

Romalea microptera Eastern Lubber Grasshopper

```
## # A tibble: 14 x 3
## # Groups:   year [13]
##     year basisOfRecord      count
##    <int> <chr>              <int>
##  1  2006 HUMAN_OBSERVATION     15
##  2  2008 HUMAN_OBSERVATION     11
##  3  2009 HUMAN_OBSERVATION     11
##  4  2010 HUMAN_OBSERVATION     14
##  5  2011 HUMAN_OBSERVATION     20
##  6  2011 PRESERVED_SPECIMEN    19
##  7  2012 HUMAN_OBSERVATION     17
##  8  2013 HUMAN_OBSERVATION     29
##  9  2014 HUMAN_OBSERVATION     41
## 10  2015 HUMAN_OBSERVATION     71
## 11  2016 HUMAN_OBSERVATION    131
## 12  2017 HUMAN_OBSERVATION    203
## 13  2018 HUMAN_OBSERVATION    607
## 14  2019 HUMAN_OBSERVATION    968
```


Romalea microptera
1885
1903
1907
1909
1915
1917
1924
1927
1935
1936
1937
1938
1939
1941
1951
1954
1956
1958
1960
1961
1962
1964
1966
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2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
60°N
50°N
40°N
30°N
20°N
decimalLatitude
decimalLongitude
basisOfRecord
HUMAN_OBSERVATION
MATERIAL_SAMPLE
PRESERVED_SPECIMEN