

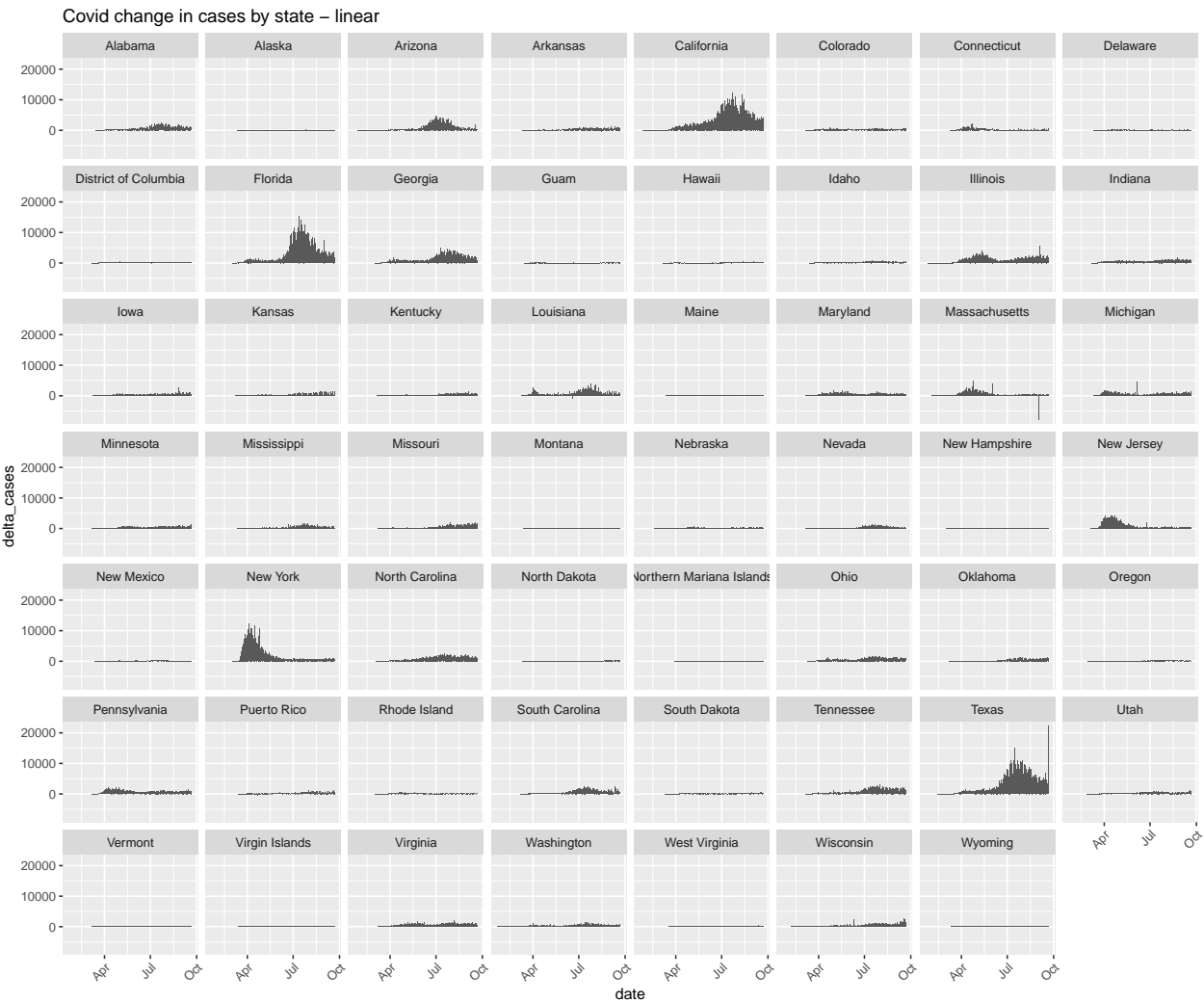
# Change Analysis

Another experiment to look at rate of change. Idea here is to compare the reported change against the cumulative sum.

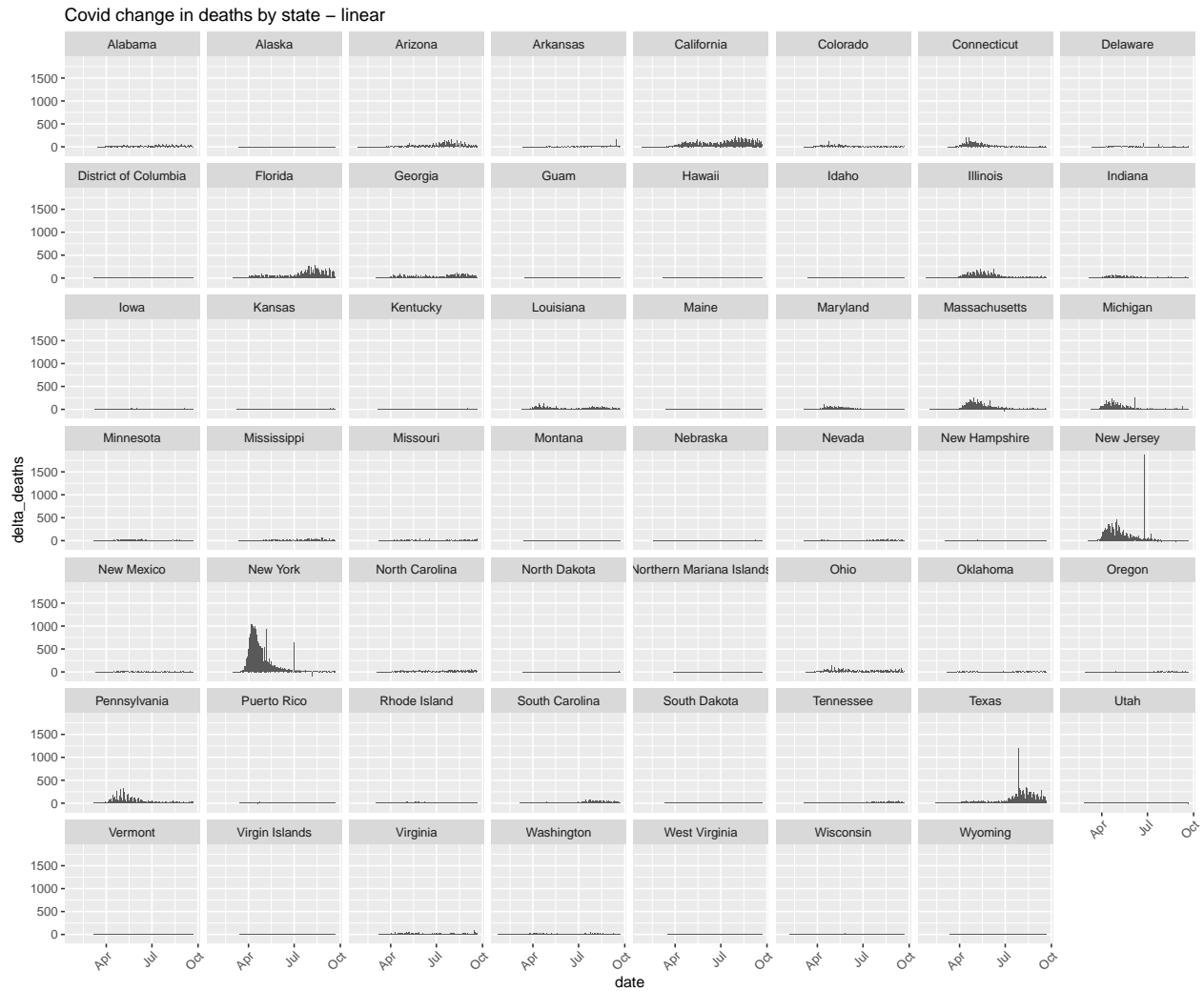
Last date for states data is 2020-09-21

## Extract daily changes

### Daily Cases



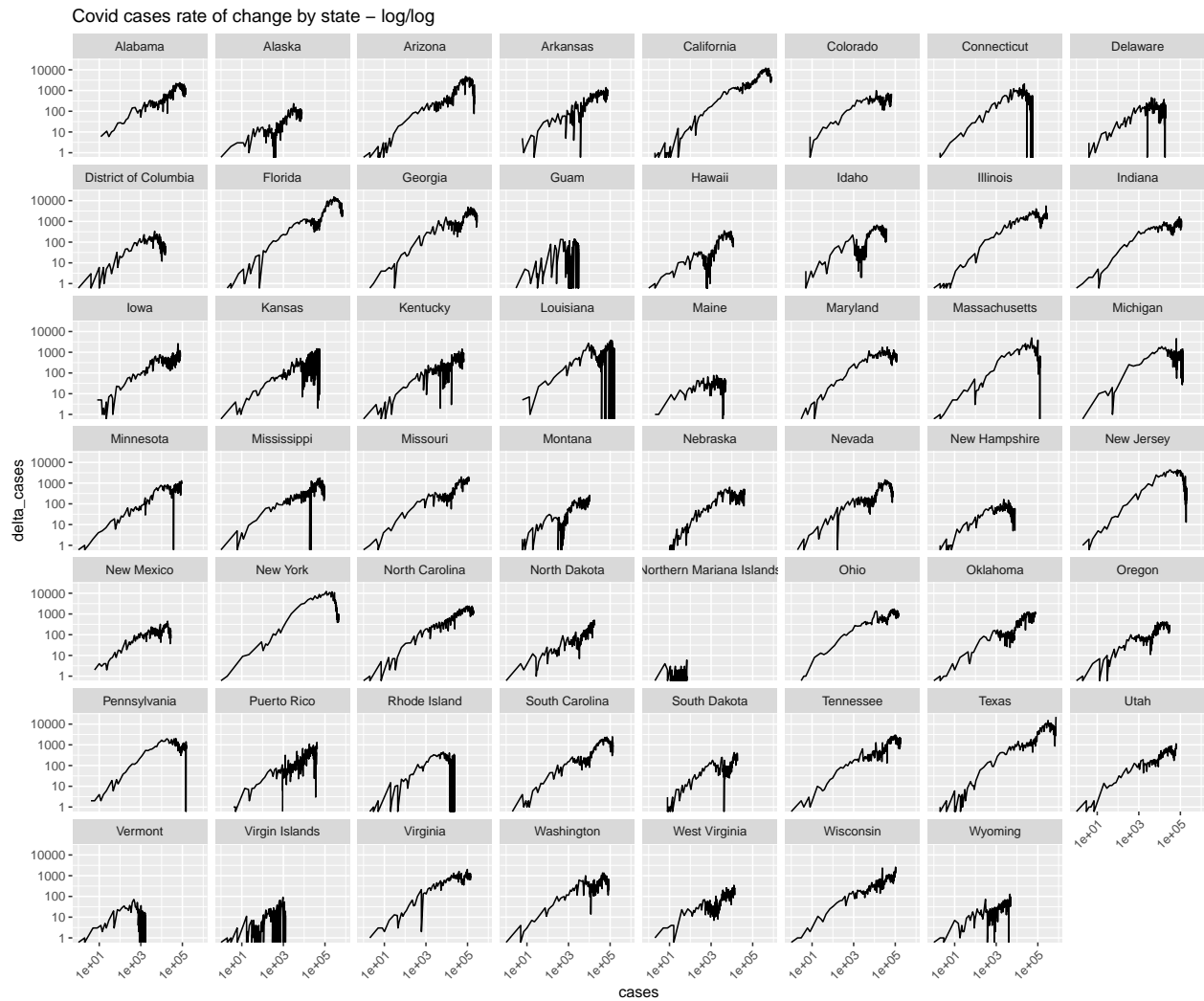
## Daily Deaths



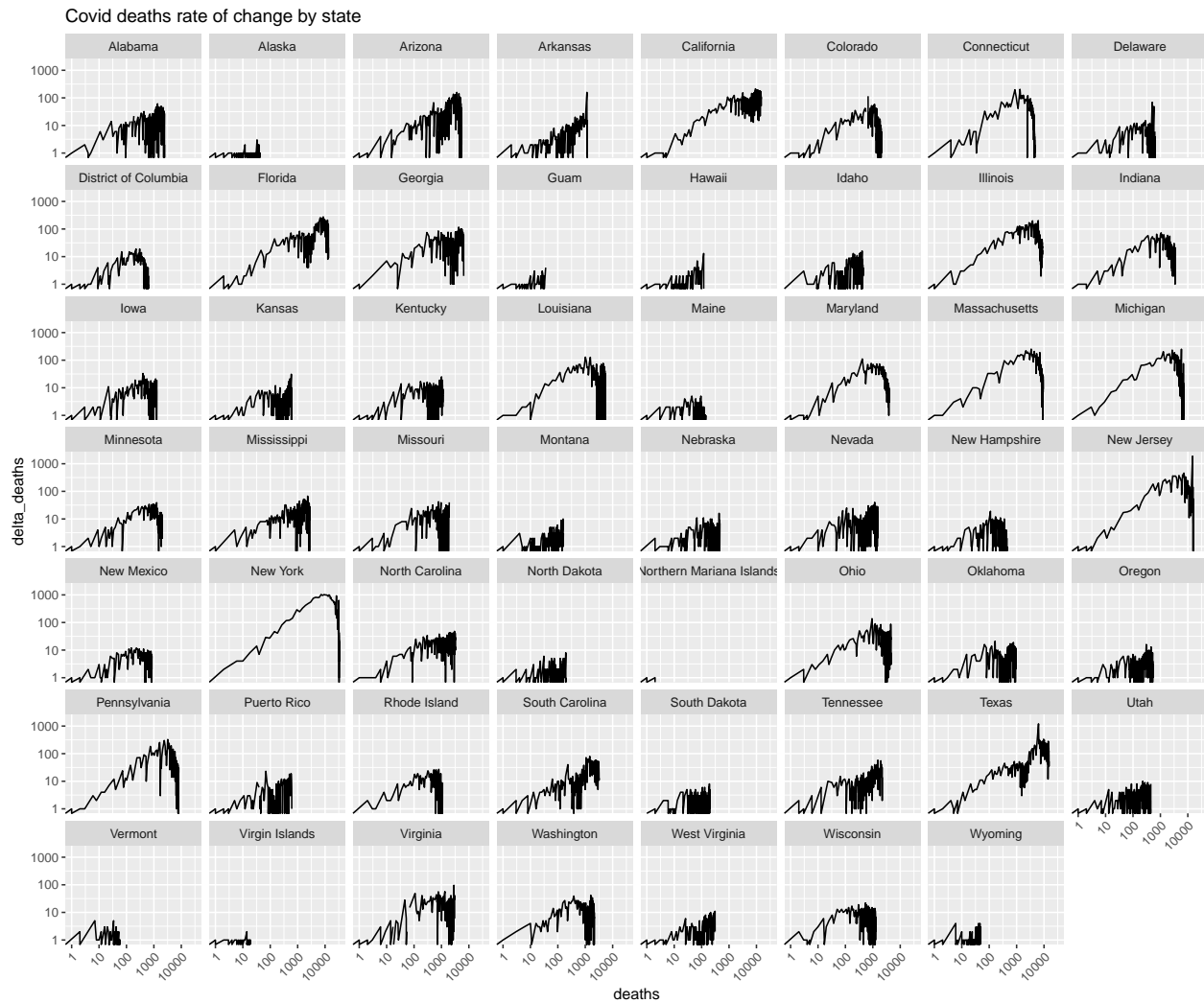
## Log of Change Over Cumulative Sum

Linear values are skewed by higher-magnitude values, so use a  $\log(10)$  on each axis. this better fits the exponential nature of the data anyway.

## Log/Log of Cases Over Cumulative Sum



## Log/Log of Deaths over Cumulative Sum

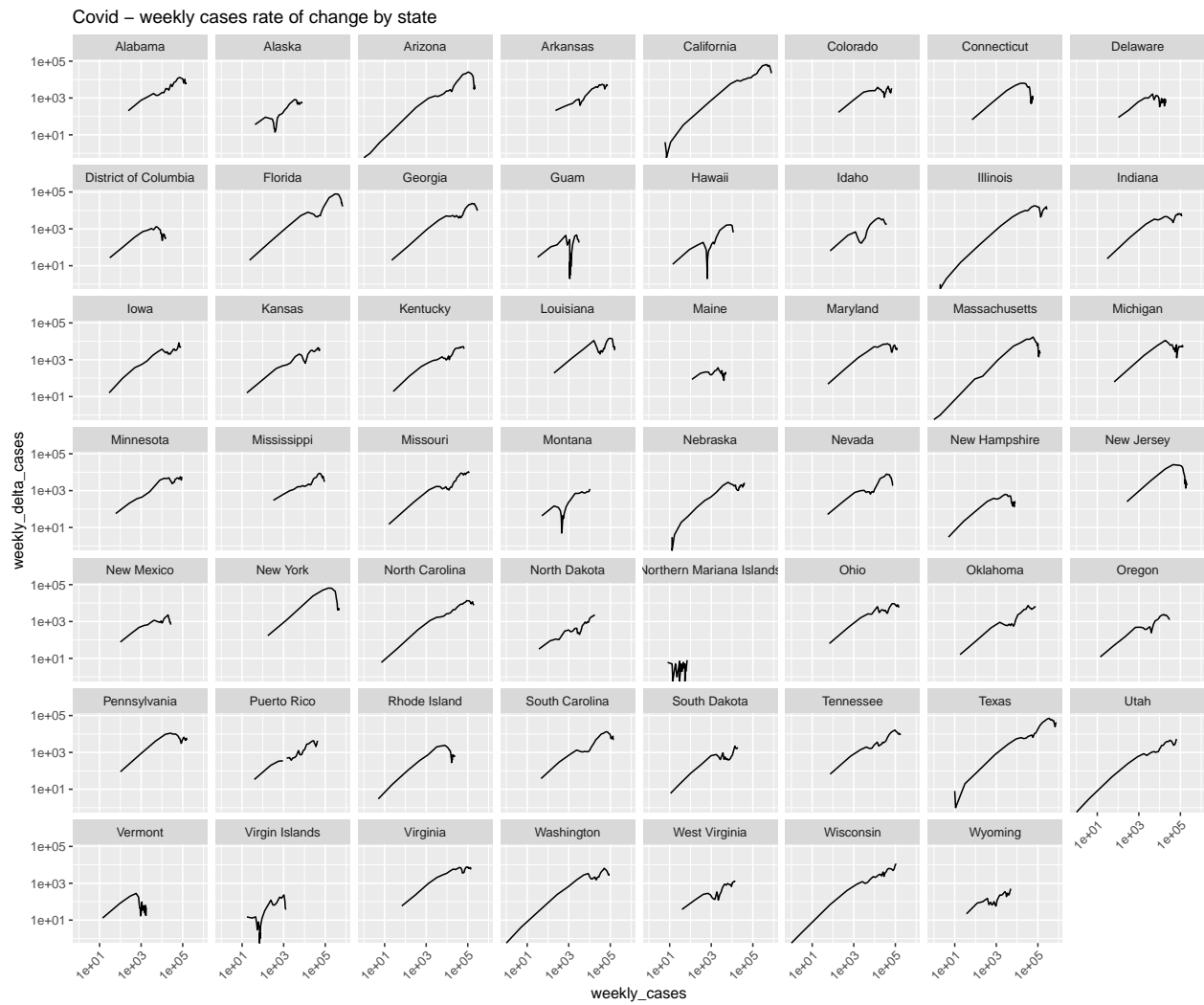


## Weekly Rate of Changes

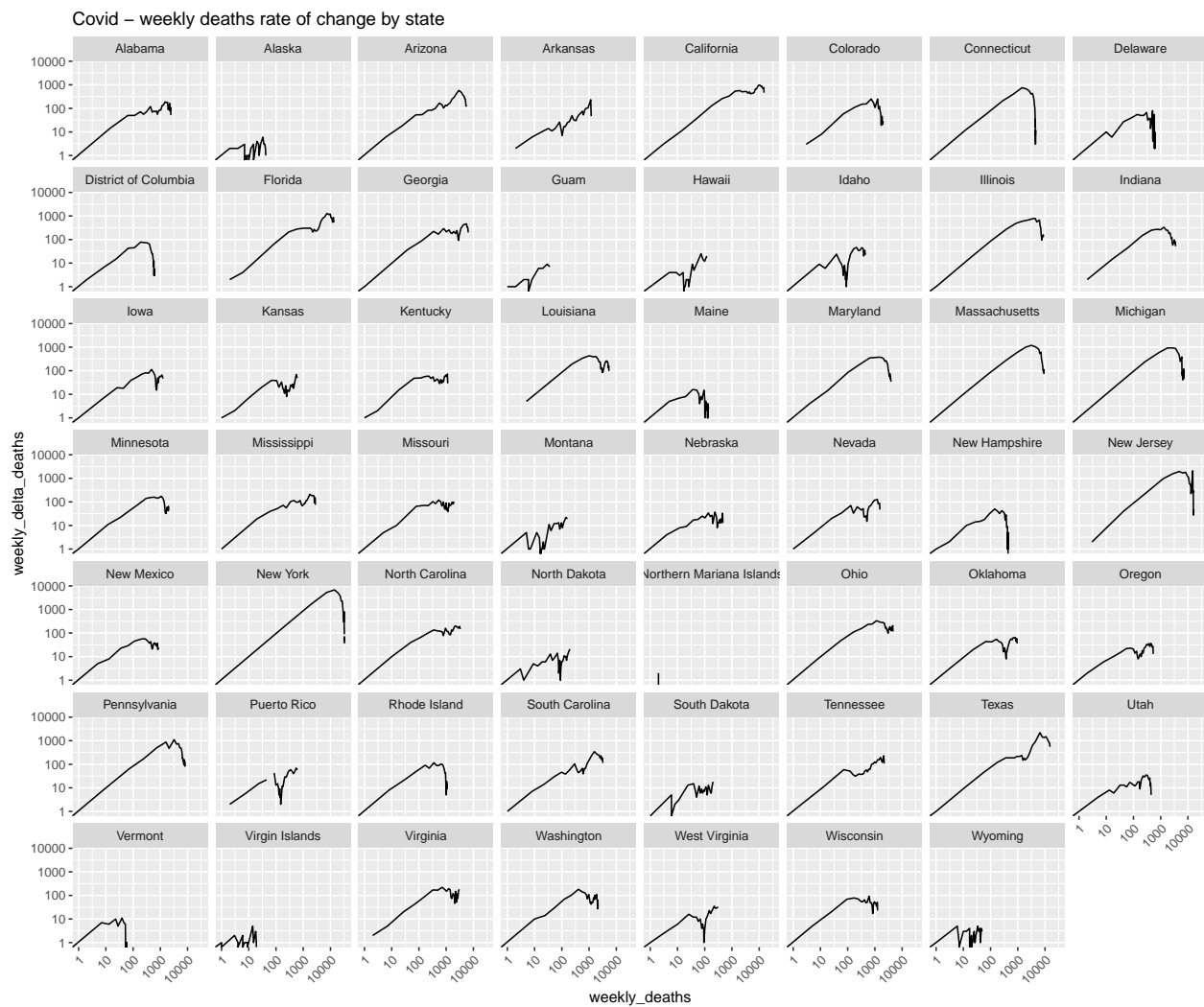
In order to smooth out the curves in the previous graphs, look at them on a weekly basis.

```
## `summarise()` regrouping output by 'state' (override with `.groups` argument)
```

## Weekly Range of Change of Cases by State



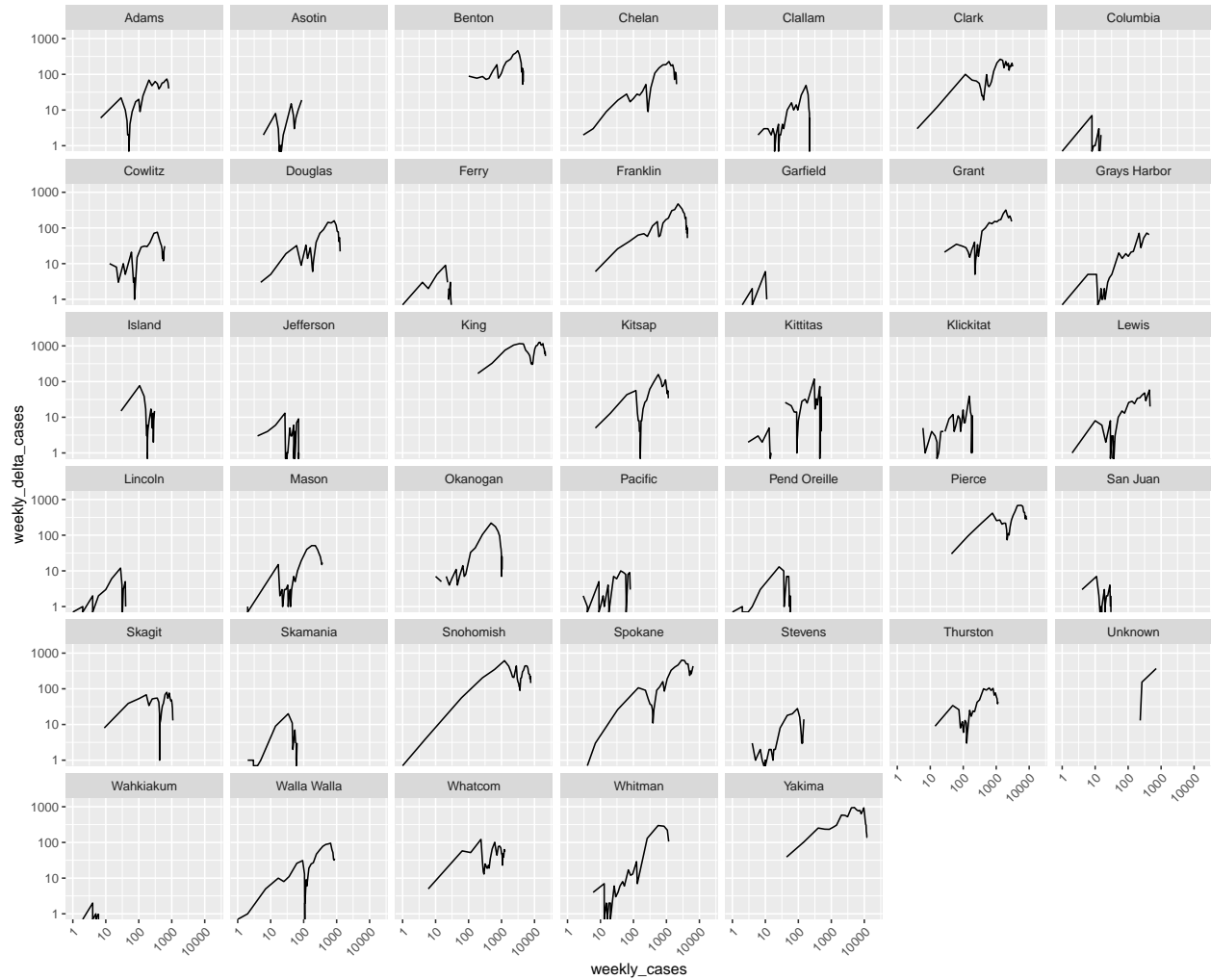
## Weekly Range of Change of Deaths by State



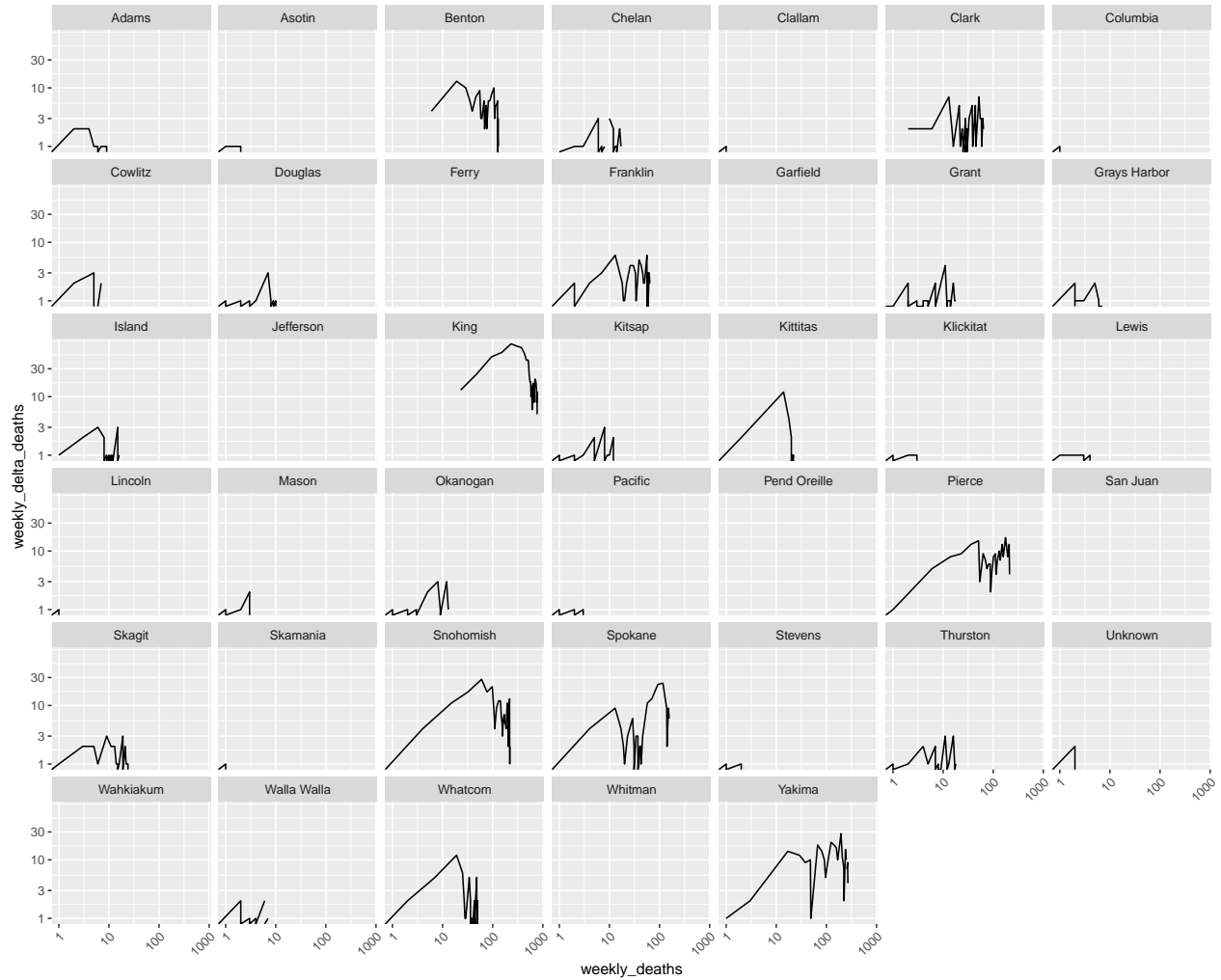
## Washington Counties

## `summarise()` regrouping output by 'county' (override with `.groups` argument)

Covid – log/log weekly cases rate of change by WA Counties



Covid – log/log weekly deaths rate of change by WA Counties

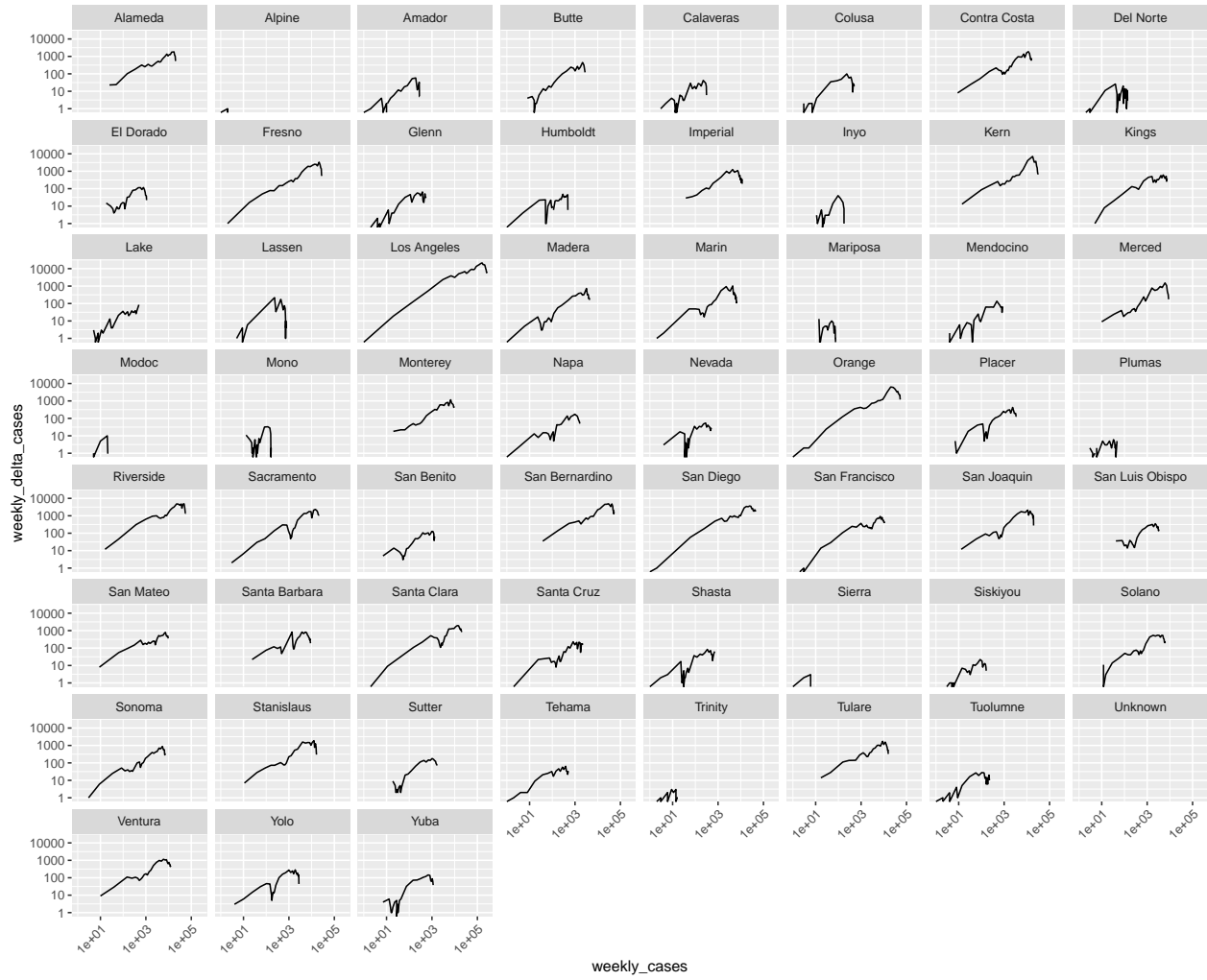


## California Counties

```
## `summarise()` regrouping output by 'county' (override with `.groups` argument)
```



Covid – log/log weekly cases rate of change by CA Counties



Covid – log/log weekly deaths rate of change by CA Counties

