SSM methods notes and writing

TO DO:

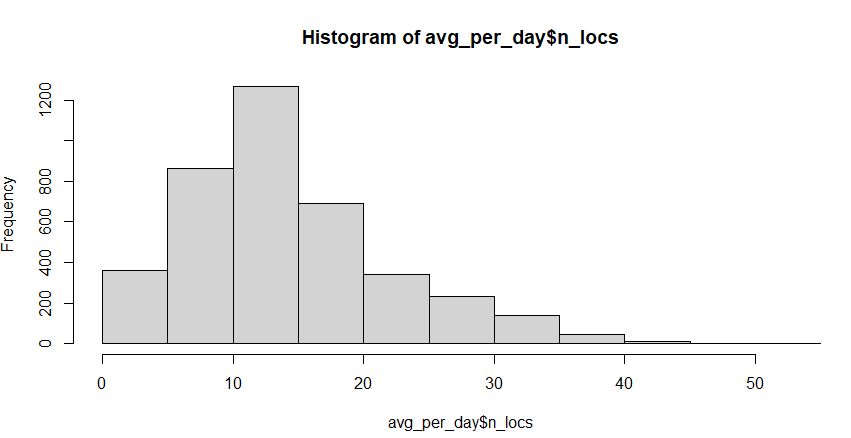
* Mia suggestion: calculate the average number of location fixes per day from data – that will help decide time step to use. USE SAME TIME STEP FOR EVERYTHING
* Test running eg all NZ data together, and running year cohorts

Number of locations per day

All NZ (2020, 2021, 2022) data combined – but some 2022 tags still going. Use file NZ\_SRW\_2020\_2021\_2022\_raw\_argos\_df\_20230706.rds

raw\_argos\_df %>% group\_by(Ptt,Date) %>% summarise(n\_locs = n())

hist(avg\_per\_day$n\_locs)



mean(avg\_per\_day$n\_locs)

14.62911

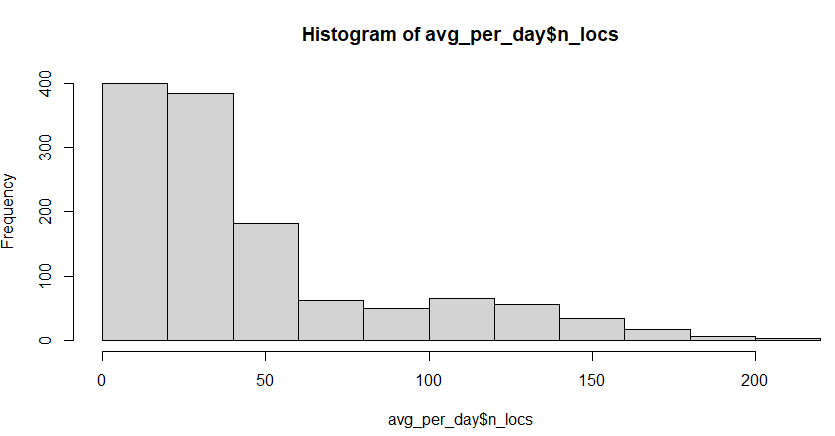
median(avg\_per\_day$n\_locs)

13

* So 12h step probably good

raw\_argos\_df %>% group\_by(cohort,Date) %>% summarise(n\_locs = n())

hist(avg\_per\_day$n\_locs)



mean(avg\_per\_day$n\_locs)

45.91753

median(avg\_per\_day$n\_locs)

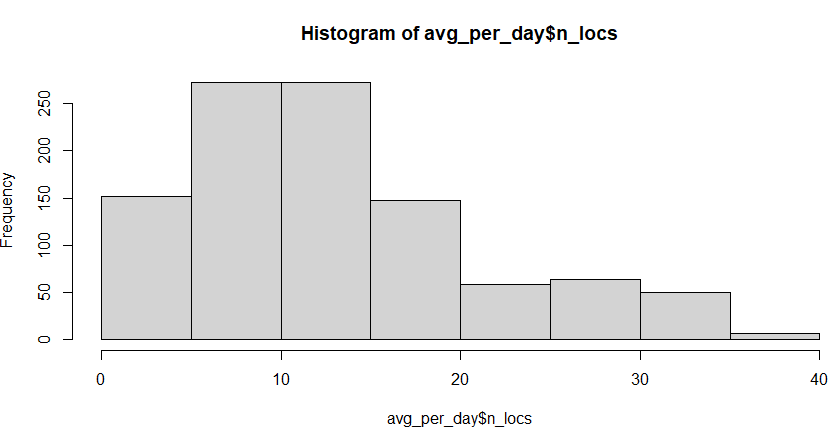
32

Australia data

Only 2022 data, some tags still going when file OZ\_SRW\_2022\_raw\_argos\_df\_20230713.rds created

avg\_per\_day <- raw\_OZ\_argos\_df %>% group\_by(Ptt,Date) %>% summarise(n\_locs = n())

hist(avg\_per\_day$n\_locs)



mean(avg\_per\_day$n\_locs)

13.4478

median(avg\_per\_day$n\_locs)

12

* So 12h probably good for everyone

Unsure if things work if all NZ data pooled together

Quite the difference if first run ssm then mp, v fit\_ssm(model=mp)