Testing carp proportional analysis method

-Simulate 3 years of known proportions as the true values (n = 10,000 each)

- Allocate each sample to 1 of 40 sites

- Give each site a random amount of variance (to simulate site level random effect)

- Draw 100 random samples from each “year”

- Run analysis

- Compare estimated true proportions to known true proportions.

True value is the blue dot, grey shows the estimated values based on a random sample (n = 100 per year)

Chart

Description automatically generated

Conclusion:

* Method is OK, estimate contains the true value