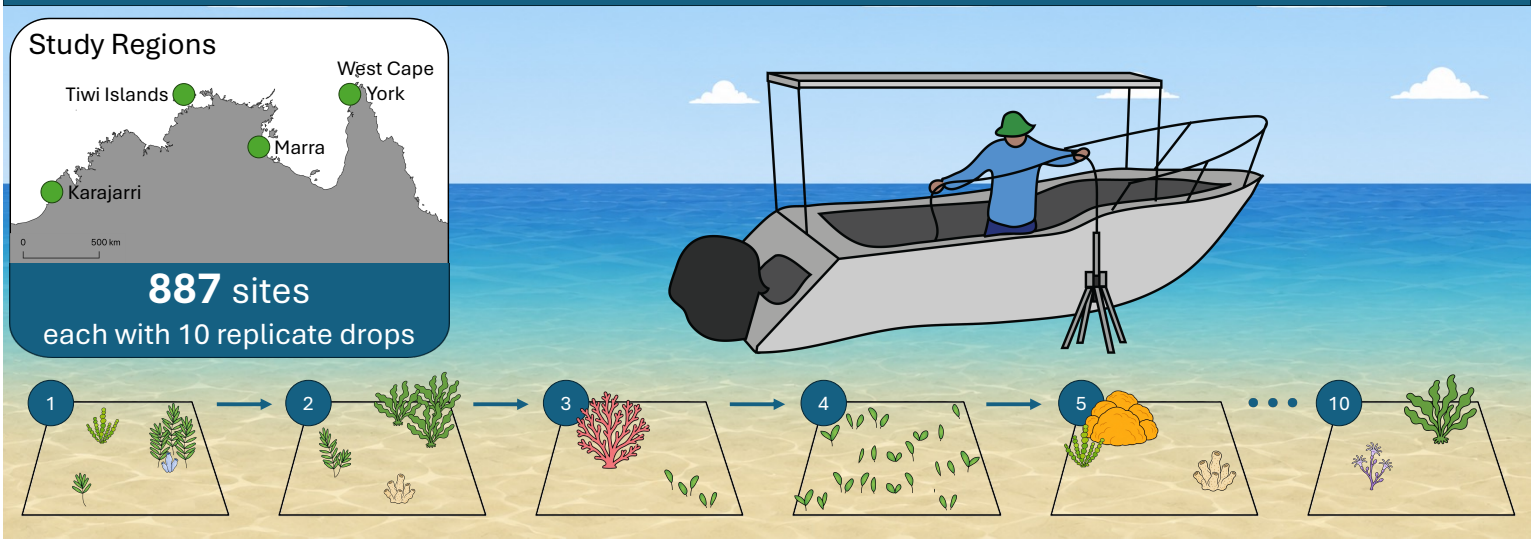
How many drops are enough?

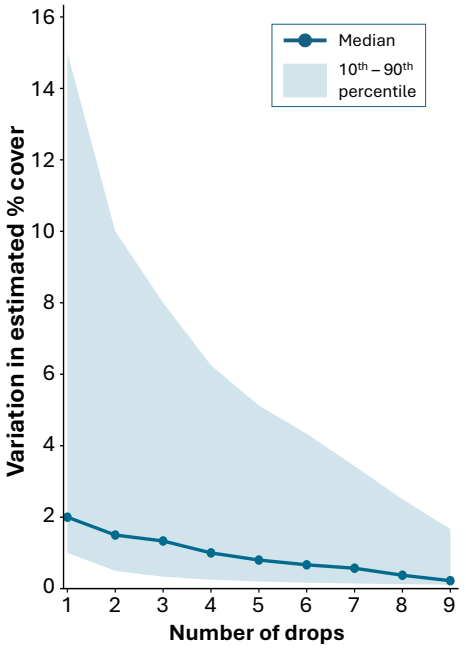
Optimising sampling effort in drop-camera benthic surveys

Scott Morrissey, Lucas Langlois, Alexandra Carter, and Catherine Collier



COVER ESTIMATION

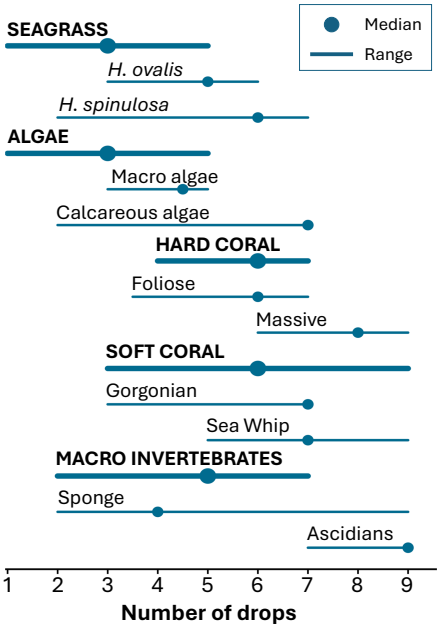
How many drops adequately estimate benthic cover?



Cover estimates improve as the number of drops increase

DETECTION RELIABILITY

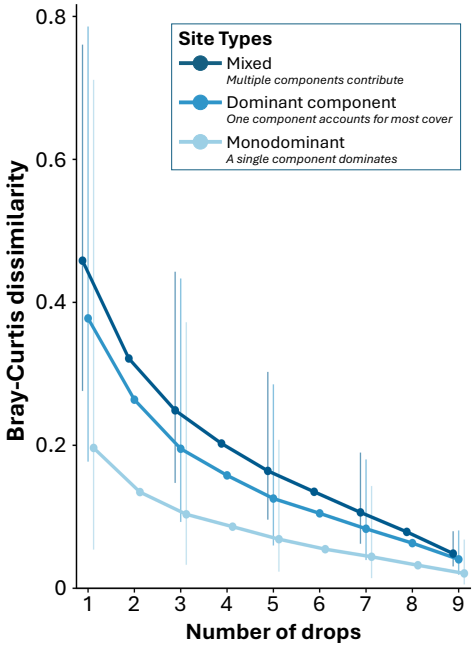
How many drops are needed to reliably detect benthic groups?



Broad benthic groups require fewer drops than finer-scale categories

BENTHIC COMMUNITY

How many drops adequately characterise the benthic community?



More drops are needed as sites become more mixed

HOW MANY DROPS DO YOU NEED?

What is your main objective?

- Estimate benthic cover → **3 – 5 drops**
- Detect specific benthic groups
  - Broad groups → **3 – 5 drops**
  - Finer-scale categories → **7 – 9 drops**
- Characterise the benthic community → **5 – 7 drops**

RECOMMENDATIONS

3 – 5 drops
Broad habitat assessments

5 – 7 drops
Benthic community assessments

7 – 9 drops
Detailed benthic assessments

Match replication to the survey objective

National Environmental Science Programme

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