

Ecological Sampling

Biology

The techniques for estimating populations without counting everything.

Method against what it suits.

Method	Suits
Random quadrats	Uniform, non-motile organisms
Belt transect	A gradient — shore, altitude
Line transect	Recording what touches a line
Mark-release-recapture	Mobile animals
Pitfall trap	Ground invertebrates
Pooter, sweep net, kick sampling	Various invertebrate habitats

Lincoln index: $\text{population} \approx (\text{first catch} \times \text{second catch}) \div \text{recaptured marked}$. It assumes no births, deaths or migration between.