

# Genome Skimming

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# What is Genome Skimming?

**Definition:** Low pass, shallow shotgun sequencing method that uses NGS to recover fragments of high copy DNA (“skimming the genome”)

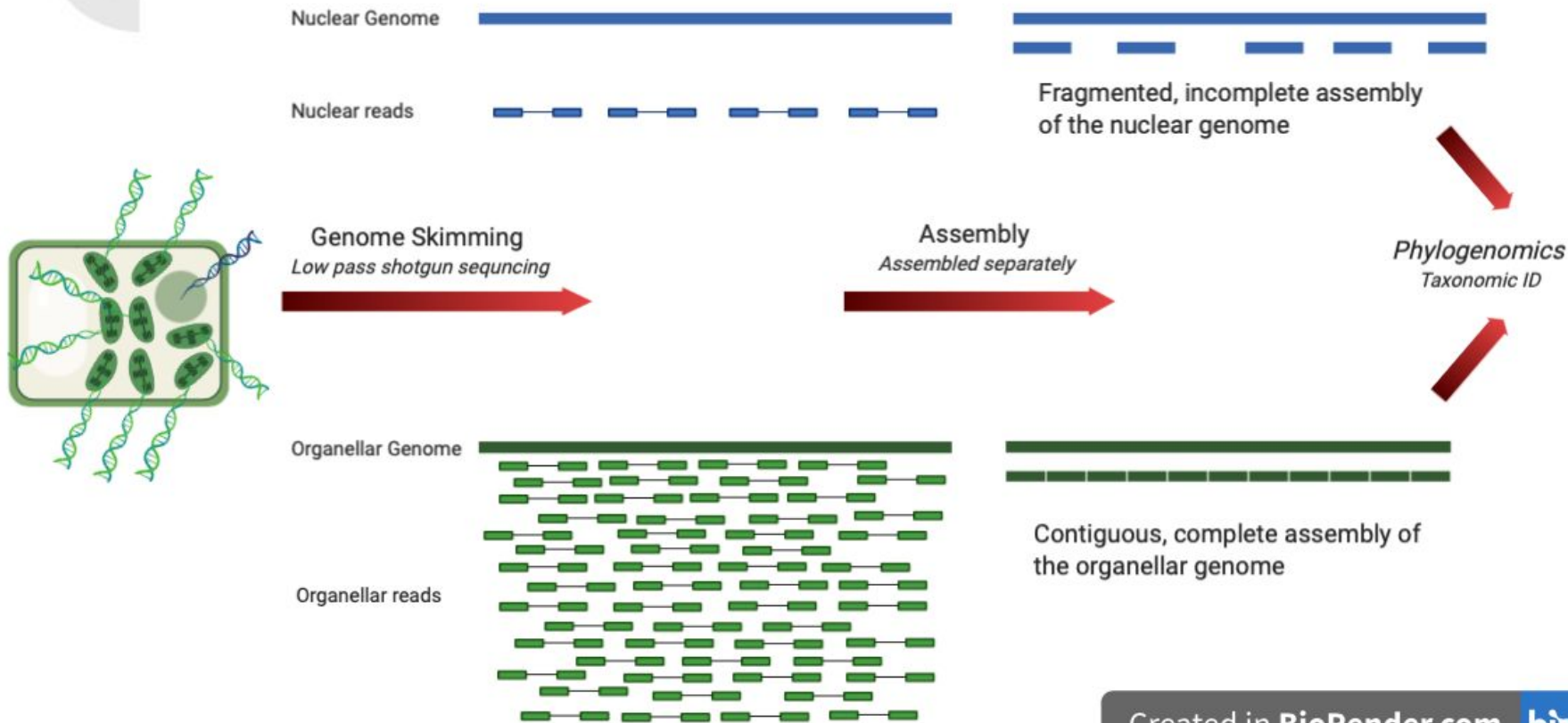
“Navigating the tip of the genomic iceberg”

1. Plastid genomes (“plastomes”)
2. Mitochondrial genomes (“mitogenomes”)
3. Nuclear repeats (e.g. satellites, transposable elements, etc.)

Our Wikipedia Article:

[https://en.wikipedia.org/wiki/Genome\\_skimming](https://en.wikipedia.org/wiki/Genome_skimming)

# Genome Skimming





## Advantages

- Low coverage = cost-effective!
- Study rare and extinct species!
- Study more degraded DNA

## Limitations

- Coverage required depends on target genome, read type, read length
- Library preparation per sample is expensive and not automated



## **Applications**

- Taxonomy
- Phylogenetics
- Evolutionary Development
- Low copy/Degraded DNA
- Botany
- Invertebrate Genomics
- Ecology

## **Tools**

- Geneious
- SKMER
- Hyb-Seq
- GetOrganelle