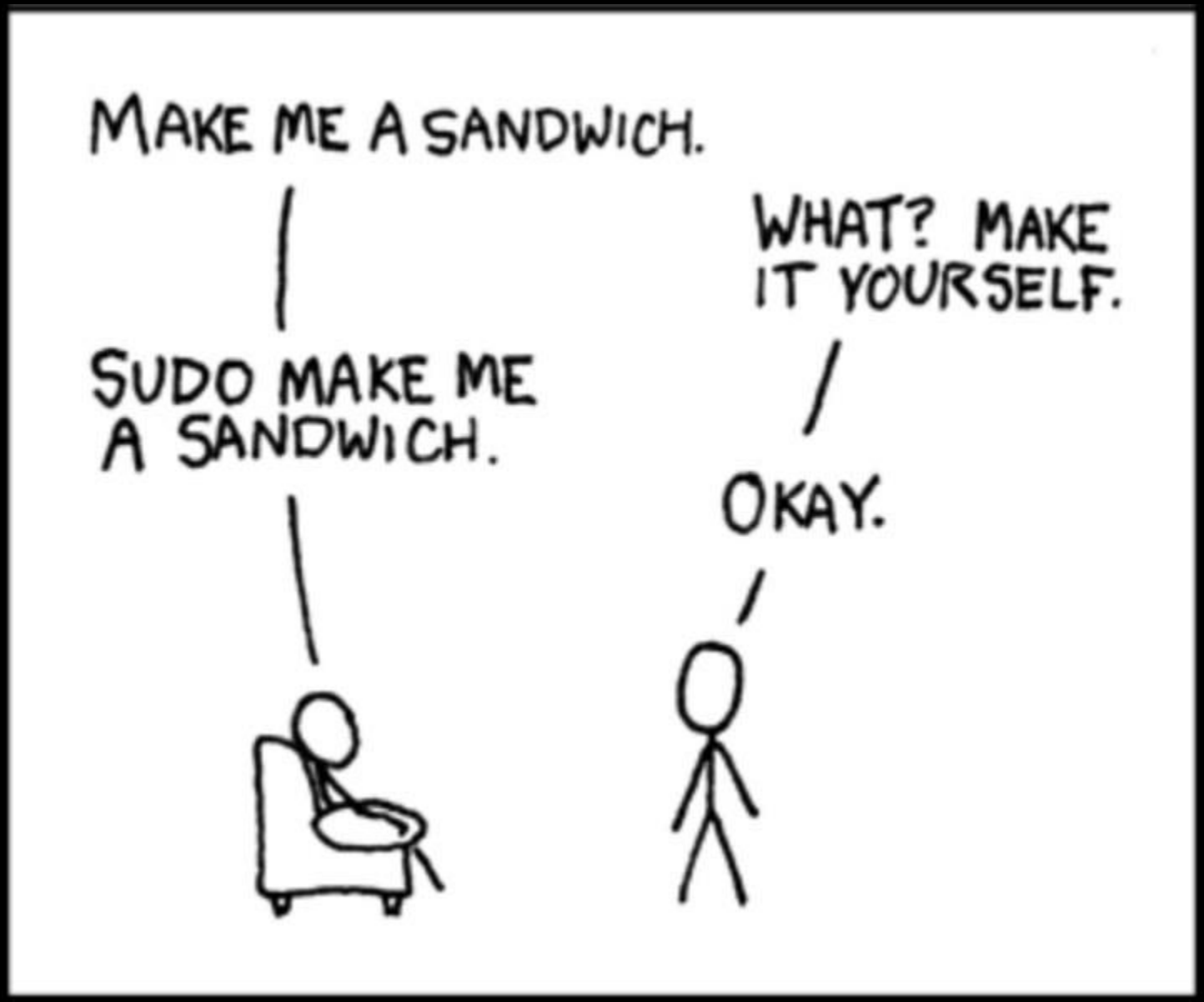
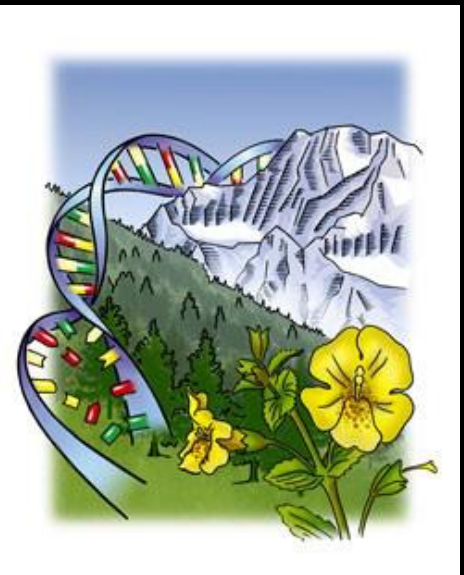
Reference-guided assembly (SNP/INDEL calling)


MAKE ME A SANDWICH.
SUDO MAKE ME A SANDWICH.
WHAT? MAKE IT YOURSELF.
OKAY.


JACKY CHEUNG

Evolutionary & Ecological Genomics

- With dozens (or perhaps hundreds) of genotypes from a range of habitats, we should be able to associate ecology with genotype
- Build phylogenies / haplotype networks to understand relationships
- Infer evolutionary history
- Study the role of selection



Genome resources at NCBI

- http://www.ncbi.nlm.nih.gov/genome/

- Many hundreds of assembled genomes and other resources
- Search-able
- Download-able
- A bit buggy / hard to find what you want sometimes

Organellar genomes on NCBI

http://www.ncbi.nlm.nih.gov/genome/organelle/

- How many organelle genomes are listed?

Organellar genomes on NCBI

http://www.ncbi.nlm.nih.gov/genome/organelle/

- How many organelle genomes are listed?

- How may fungal species?

The Short Read Archive (SRA)

http://www.ncbi.nlm.nih.gov/sra

- Genomic data on many tens of thousands of samples
- Search-able
- Download-able
- Not assembled

Homework

By Thursday

–Read up on fungal mitochondrial genomes (it is fairly short)

http://mitofun.biol.uoa.gr/

- Email me something interesting about fungal mitochondria

And, learn to edit text files in UNIX using vim – do at least all of Lesson 1 (including the summary), but logging on to my server and running:

vimtutor

Just type that in and go through the first lesson, by reading through it, scrolling down as needed, and following the instructions.

Over the weekend -

Start the bash tutorial

http://linuxconfig.org/bash-scripting-tutorial

By next Monday

- Email me a bash script for SNP genotyping your cp

- By next Tuesday
  - Email me a 'draft' SNP table for your ecotype