

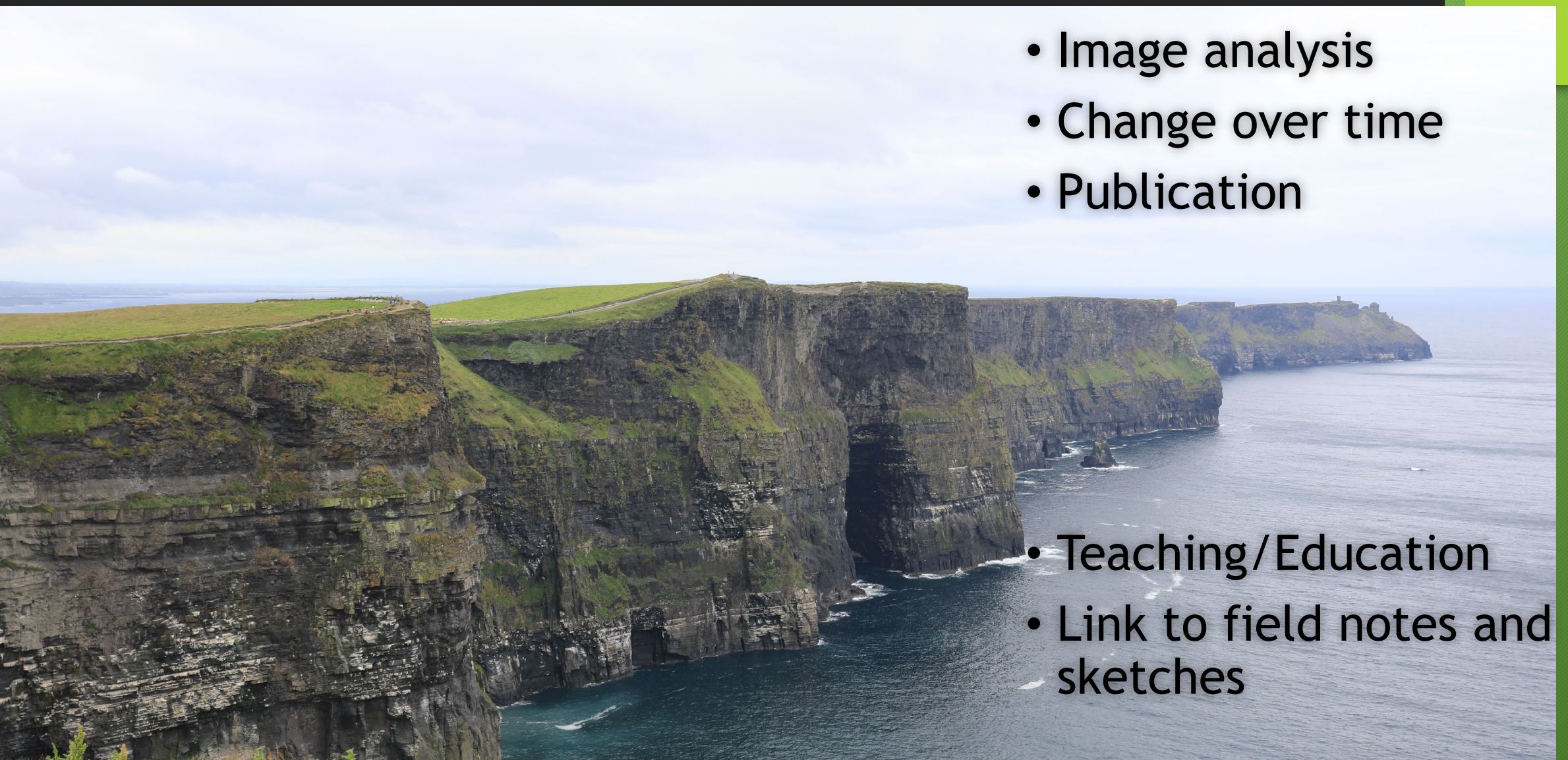
Field Photography & Sampling



A good photo is worth a thousand words...

- Image analysis
- Change over time
- Publication

- Teaching/Education
- Link to field notes and sketches



Joy



Camera Types - Advantages/Disadvantages



- Digital multi-tool, including safety
- Easy to use
- May already have/good back up
- Resolution
- Expensive



- High resolution
- Publication quality
- Expensive
- Heavy
- Need experience

Lenses



- Landscape - Wide angle , 12 to 35mm
- Macro - Close up, 50 mm
- Telephoto - 200+ mm

Mirrorless



- High resolution
- Publication quality
- Expensive
- Lighter than D-SLR
- Need experience

Point and shoot



- Good quality
 - Fixed lens
 - Cheaper
-
- Durability ? Don't last long with heavy use

Weather and setting



Quadcopter



- High resolution
- Aerial perspective
- 'Remote'

- Cost
- Need experience

Tips - First photograph - General overview



- Sets up/provide context to next photos
- Photos **MUST** correspond to field Notes, #/sequence

General and close up



Working with light



Golden Hour









Marking subject & Scale

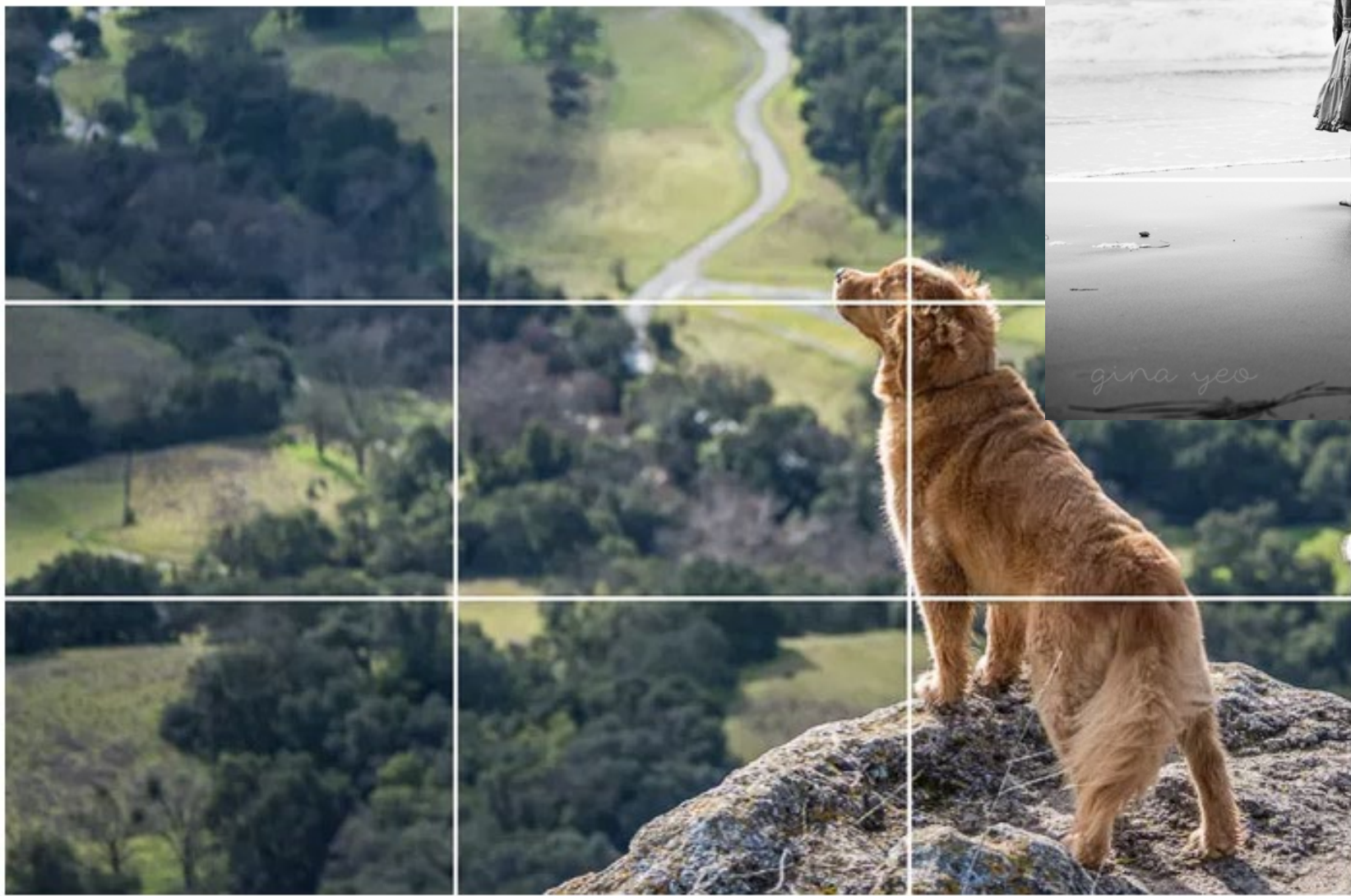
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Rule of thirds



Leading
lines



Sampling

Primary questions

- Location and description/ context?
- Size and nature?
- Ethics: Do I need a sample / Do I have permission?
- Is it representative or unique?
- Fresh or weathered?
- Do I have the proper tools?

Selecting

- Vertical and horizontal intervals
- Lithological variations
- Boundary types
- Resource and field constraints
- Identify cross contamination possibilities



Labelling

- Critical
- Sample dependent (competent vs. friable)
- Double to triple label (sample, inside tag, bag label)
- Dating contamination possibilities
- Correspondence to notes, sketches and photos



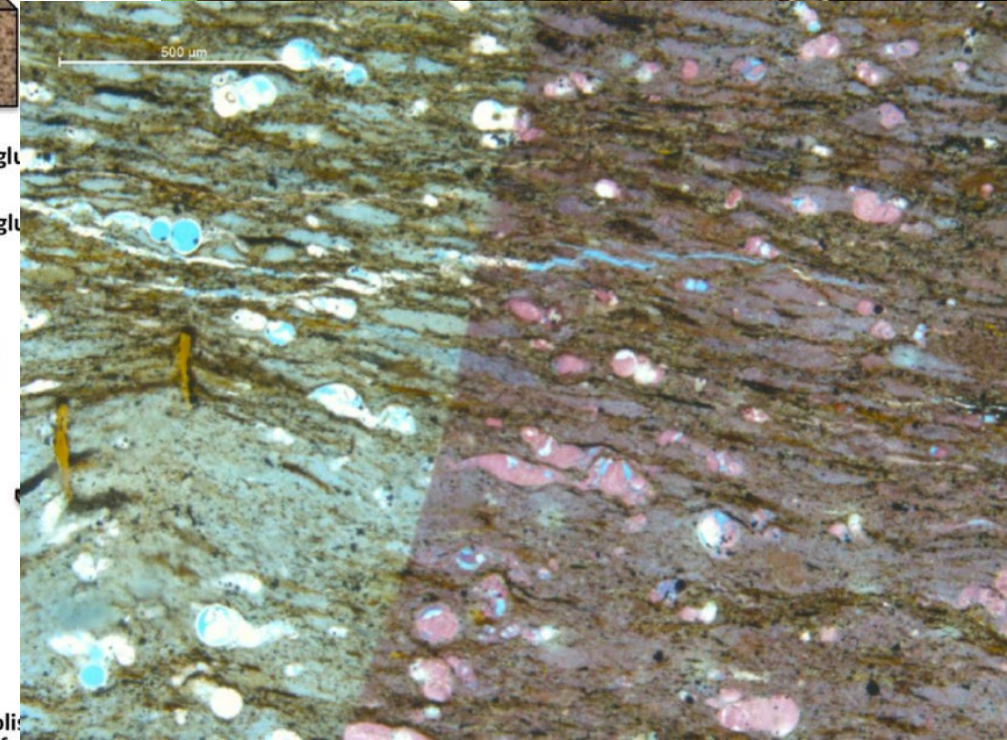
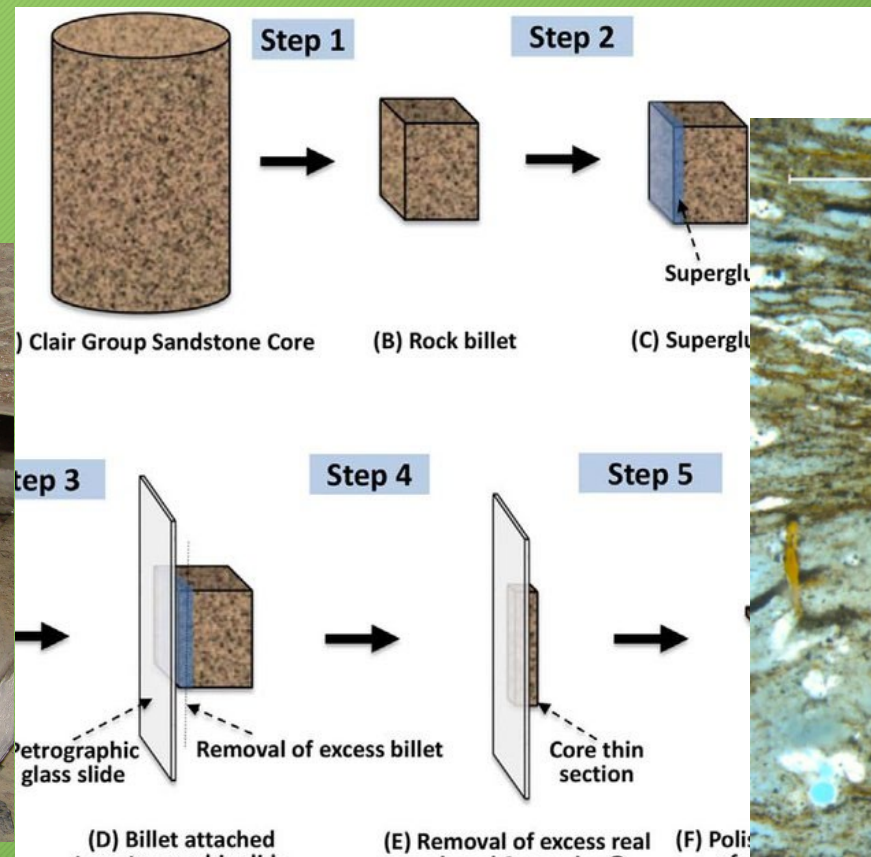
Sample extraction

- 7 - Ps
- Location
- Ethics
- Proper tools and proper usage
- Safety
- Knowledge and Skill
 - How rocks break/ type dependent



Samples for Thin sections

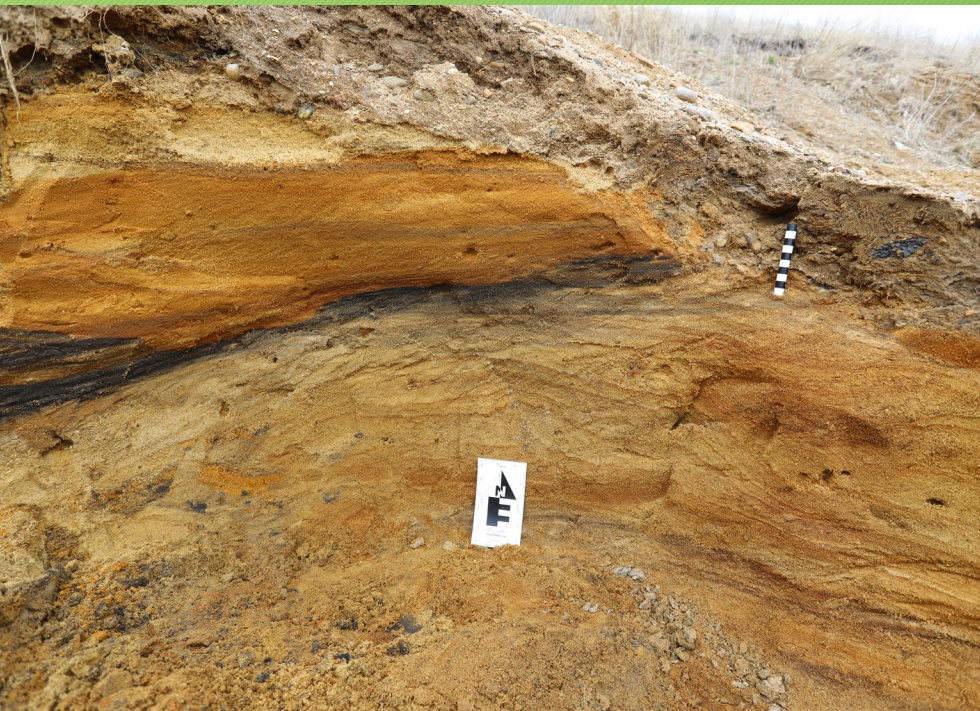
- Size 10 * 5 * 5 cm , small but not to small
- Grain size dependent
- Orientated..?



Orientated samples

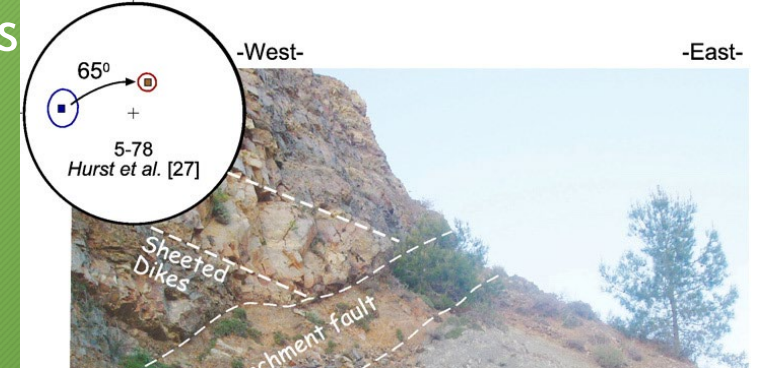
- **Course orientation**

- Bedding, Younging
- Solidification margins



- **Fine orientation**

- Dating, paleo magnetic, studies
- Compass measurements
 - Strike - dip
 - Bearing
 - Clinometer
 - Drilled out



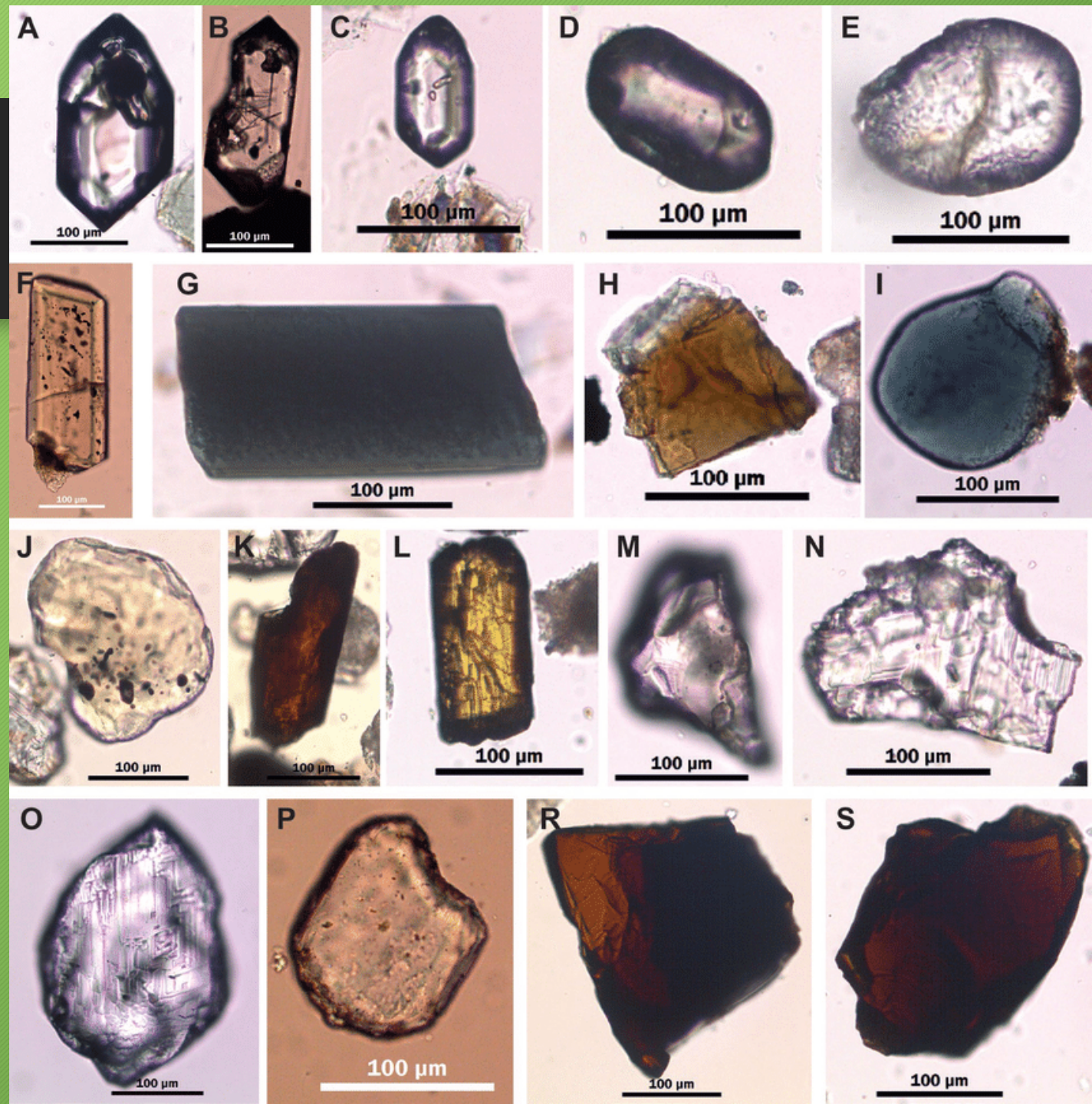
Geochemical samples

- 200 grams is generally enough
- Fresh, NOT weathered slump
- Contamination during sampling
 - Hammer , Dremel tool/bits



Mineral extraction

- Depends on type of mineral needed within study and the sample's composition.
- Heavy minerals (e.g. Z-T-R) you may need 1 to 2 kg of original sample.

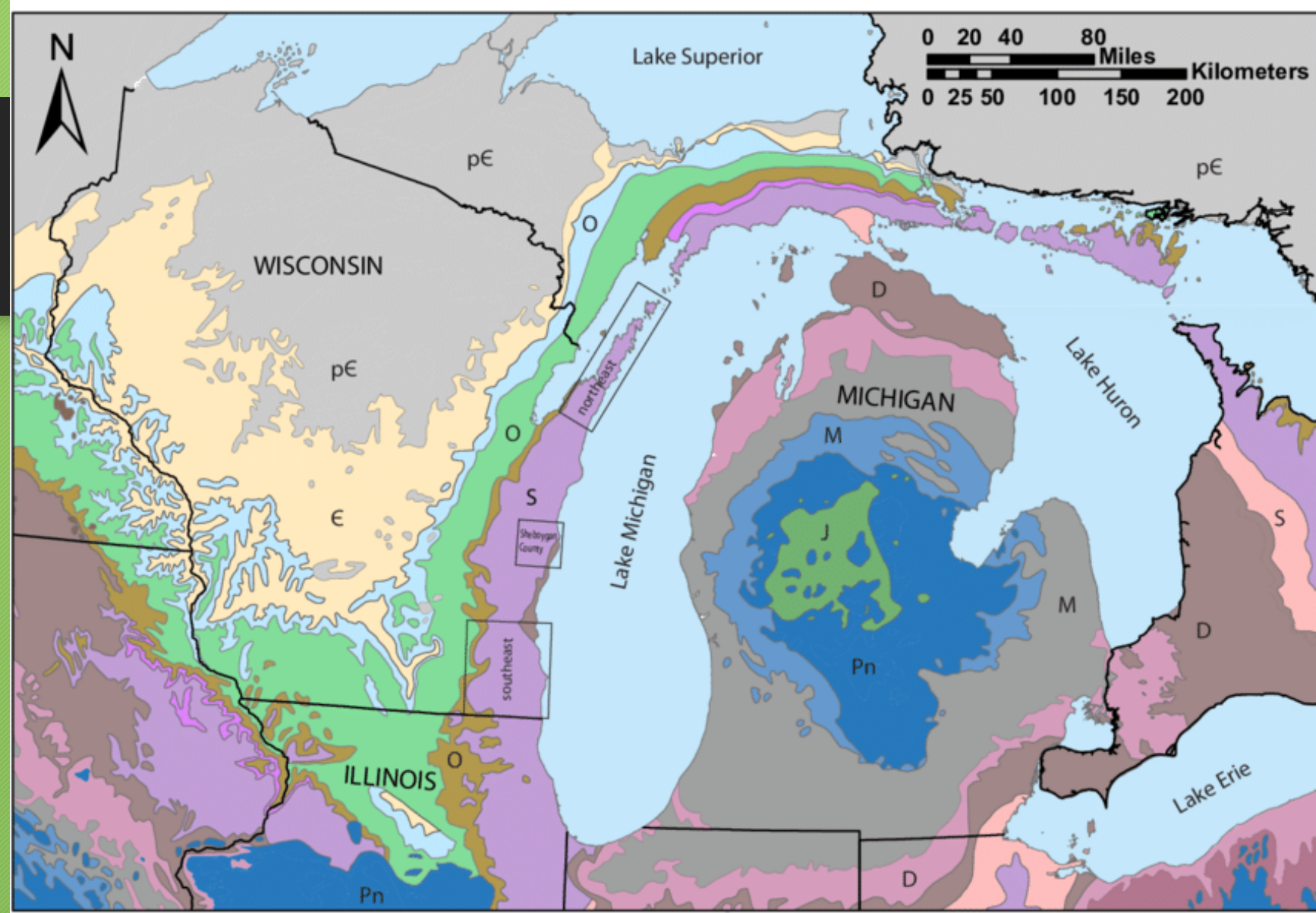


Fossils (Mega vs. Micro)



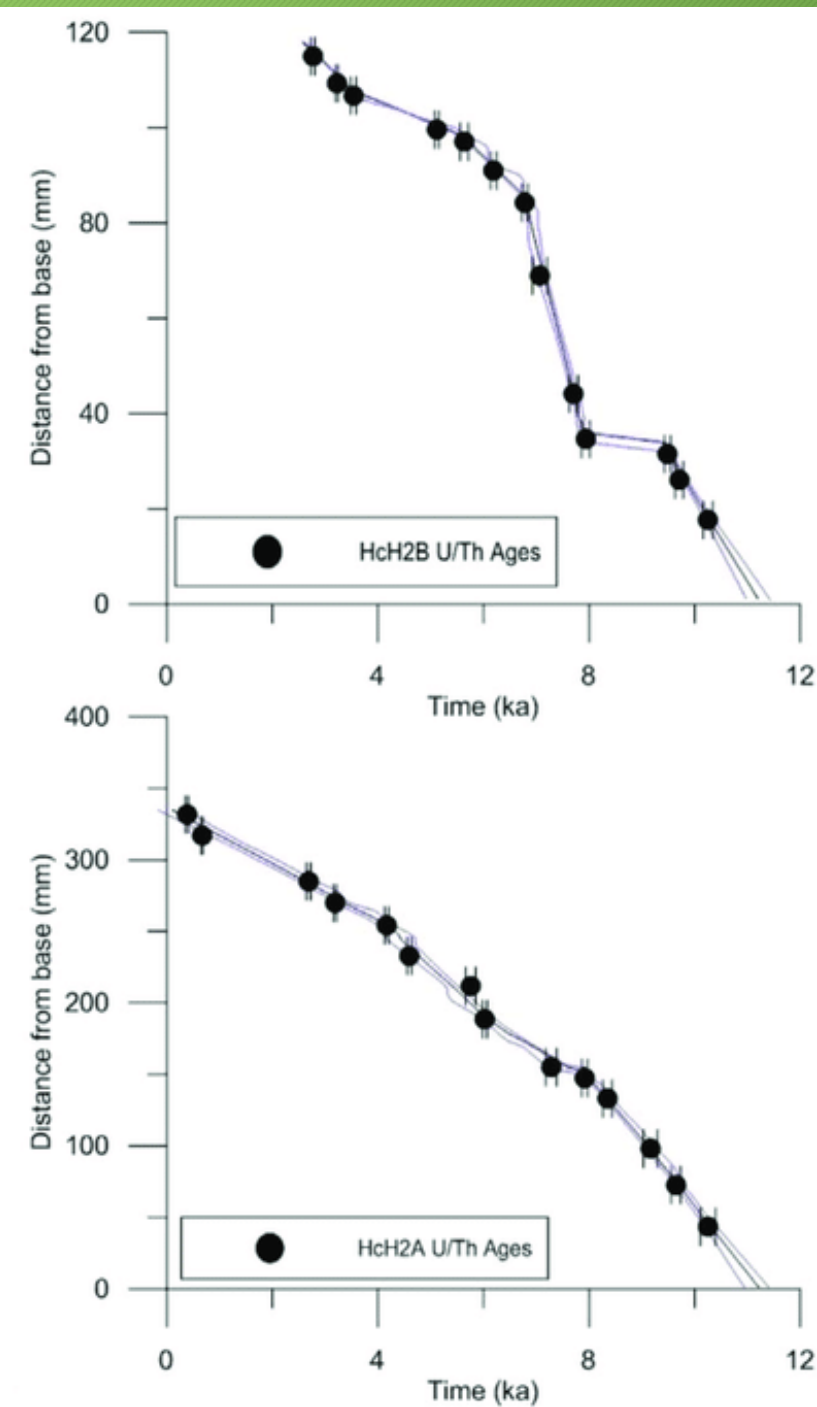
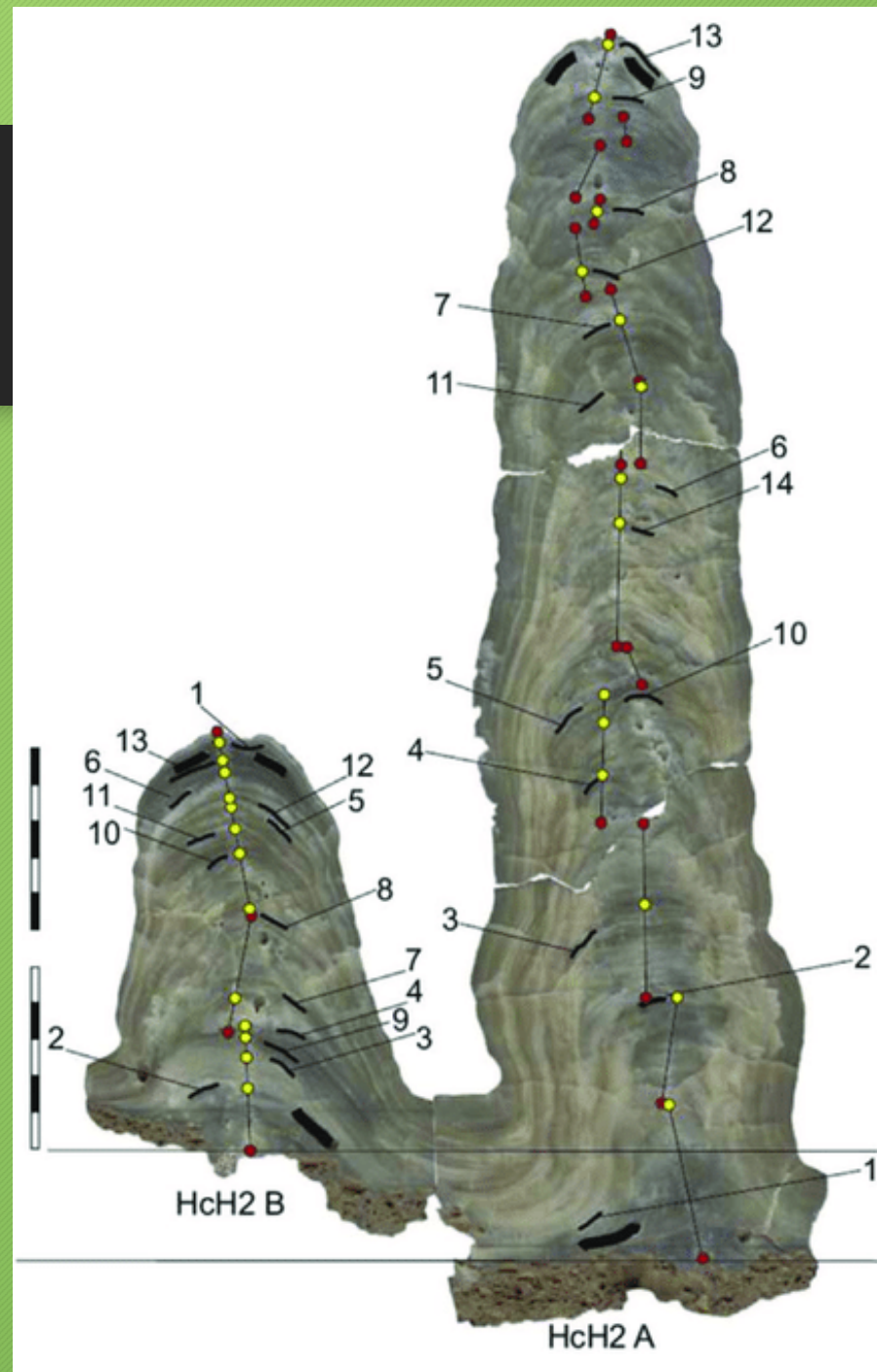
Regional Studies

- Low resolution
- Small sample #s representative of whole area



High resolution

- Great care and patience
- Beware of contamination at all phases of research



Labelling take 2 and Packaging

- Sample number
- Cross reference to field book
- Location
- Oriented or not
- Rock type
- Associated with other, adjacent?, samples
- Where are you, where do the samples need to be?
- Permits
- Packing: cling wrap, paper, polythene bags, sharpie, contamination?, invasive species...