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A Glimpse of the Syn- and Post-Glacial Biosphere Recorded in the Late Neoproterozoic Pocatello and Perry Maple Canyon Formations, Southeastern Idaho and Northern Utah, USA

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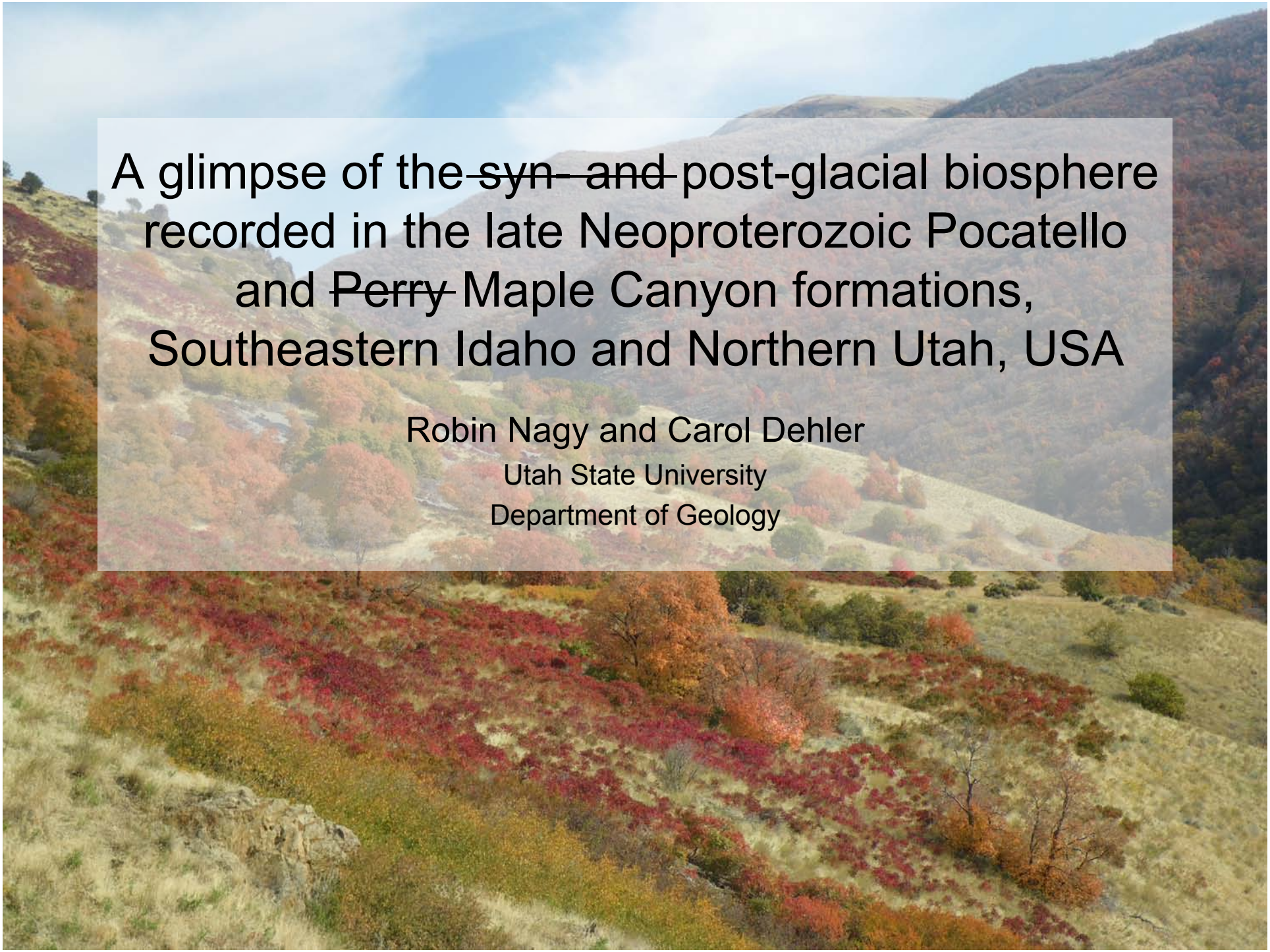

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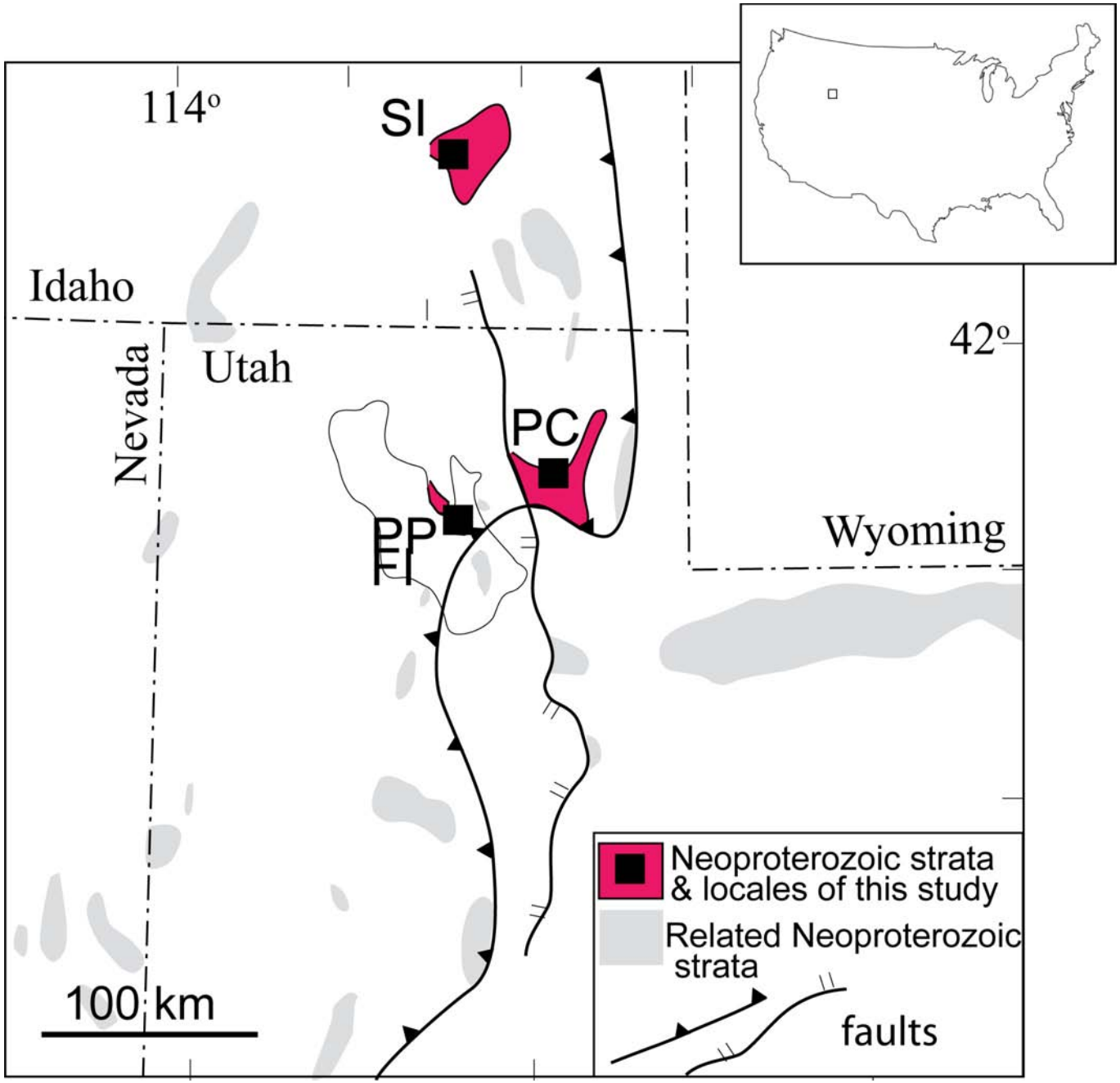
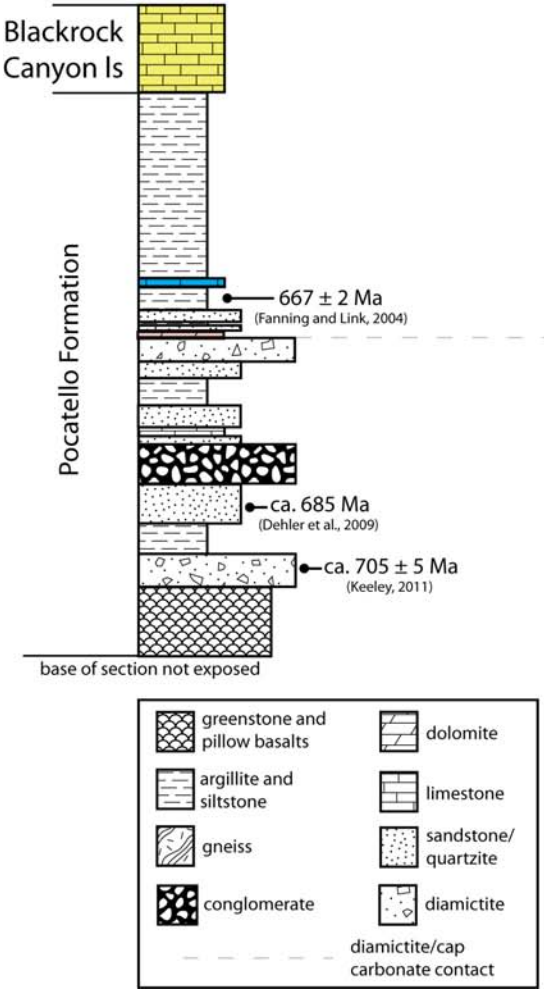
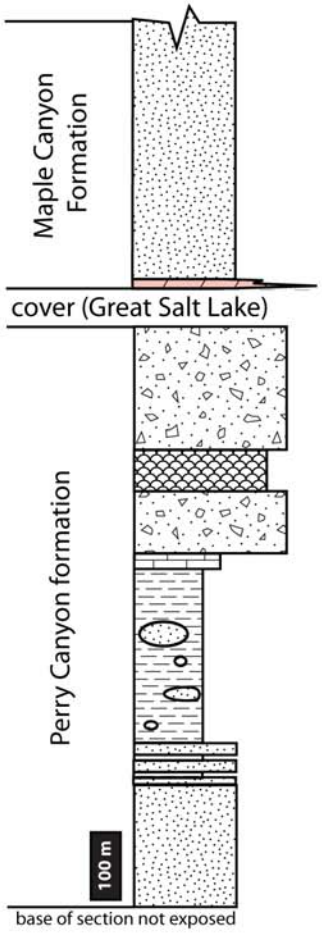


Modified from Yonkee et al., in press

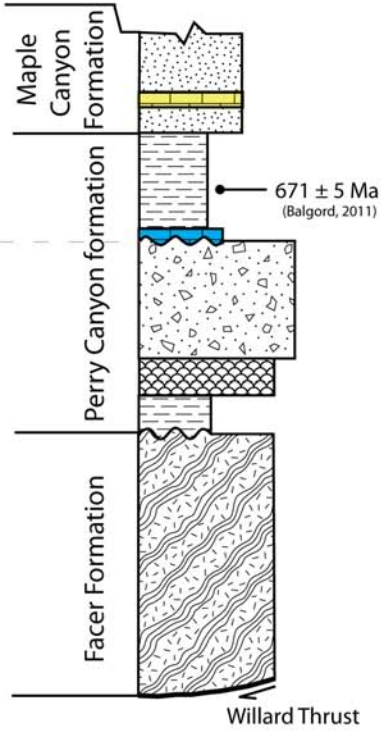
Southeastern Idaho



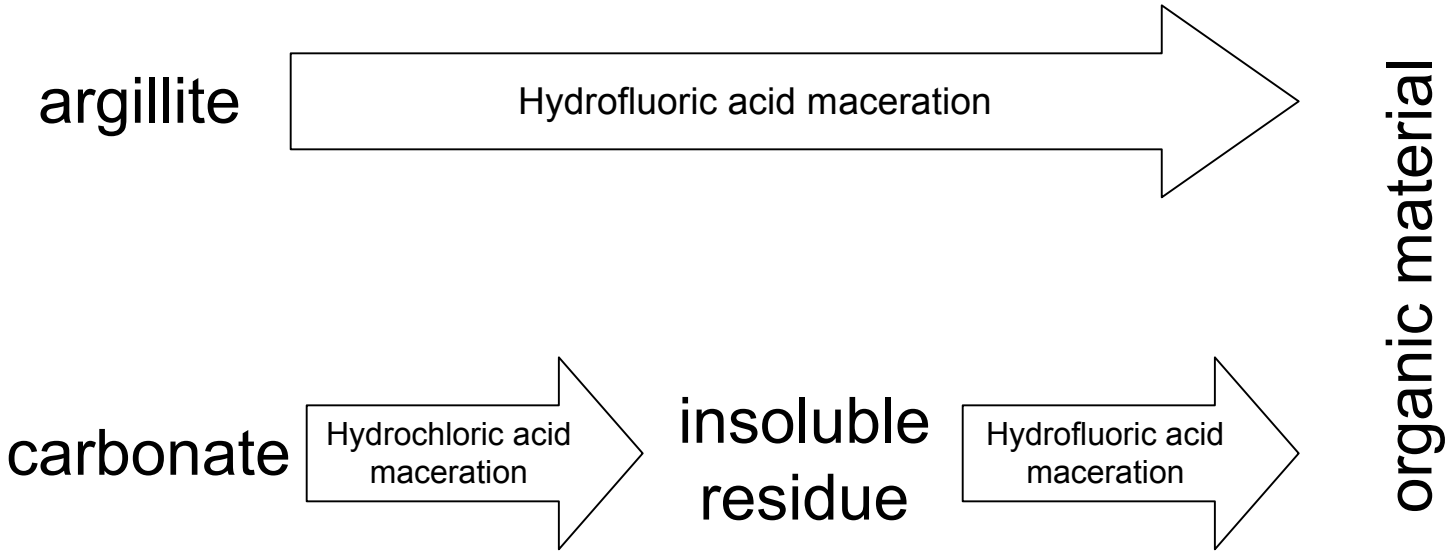
Fremont Island
Promontory Point,
Northern Utah



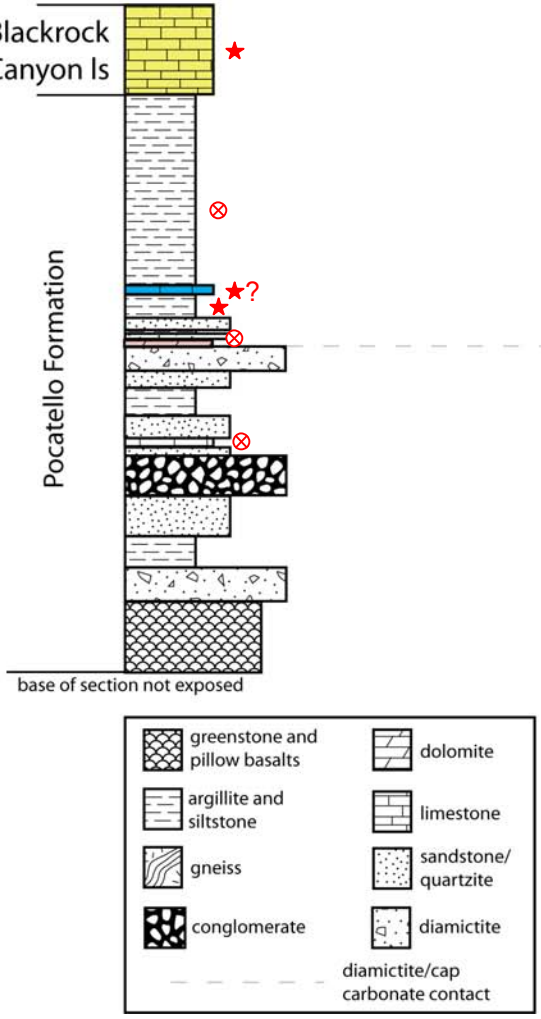
Perry Canyon,
Northern Utah



Modified from Link, 1983; Balgord, 2011; and Dehler et al., 2011


argillite
Hydrofluoric acid maceration
carbonate
Hydrochloric acid maceration
insoluble residue
Hydrofluoric acid maceration
organic material

Southeastern Idaho



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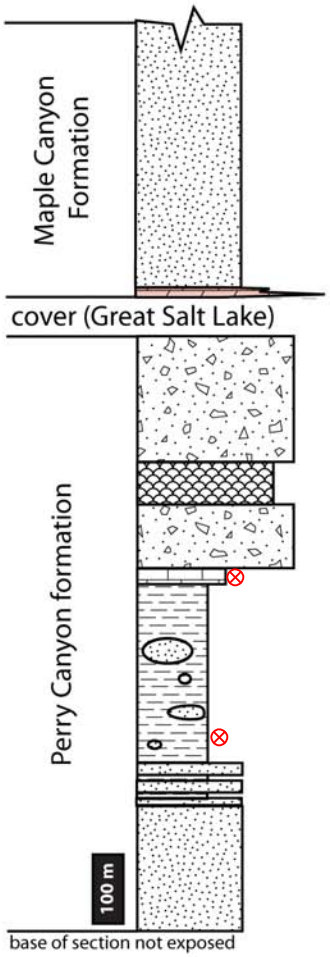
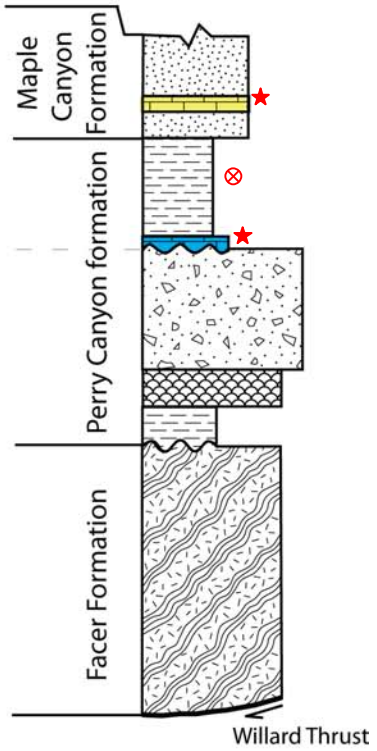
Fremont Island Promontory Point, Northern Utah

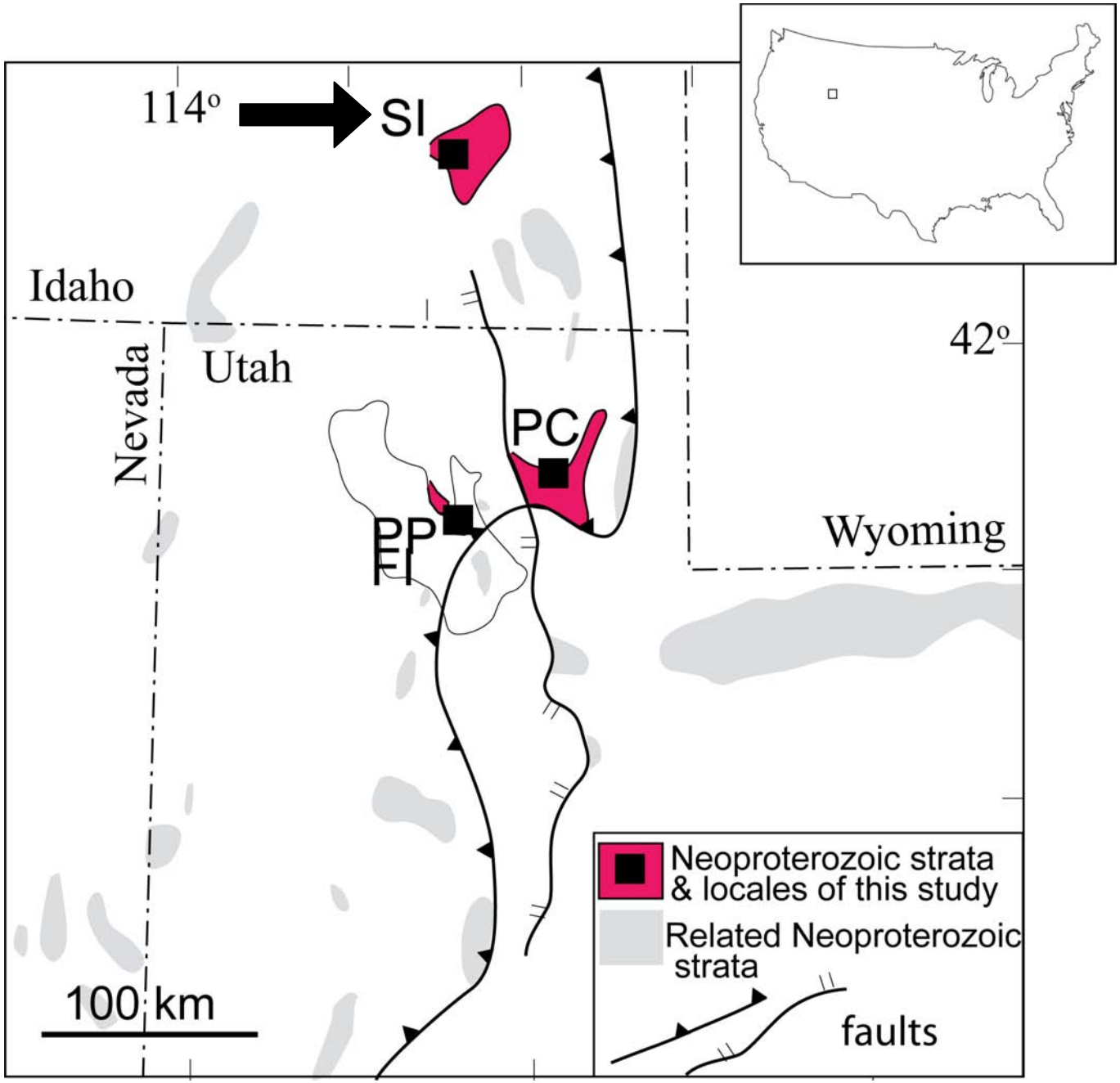


Perry Canyon, Northern Utah



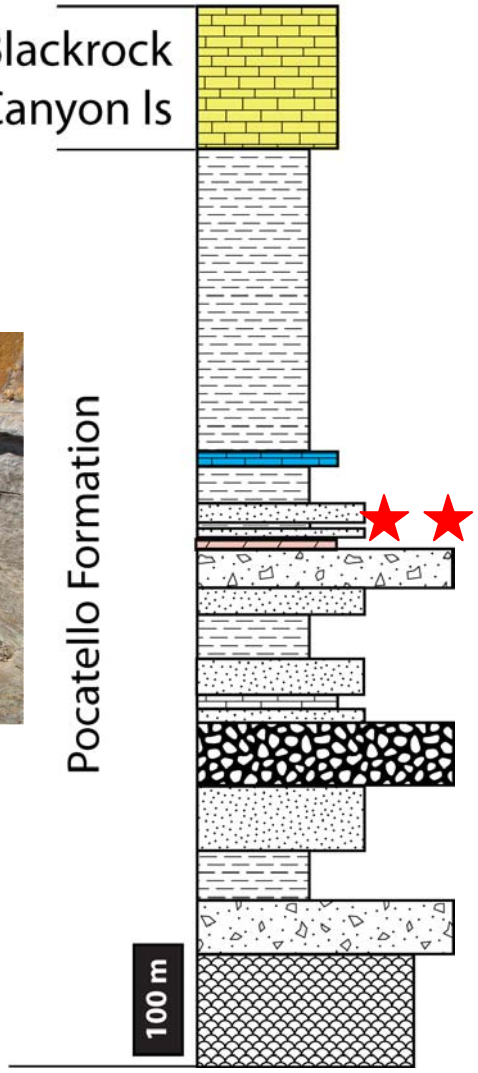
★ fossiliferous sample

⊗ barren sample



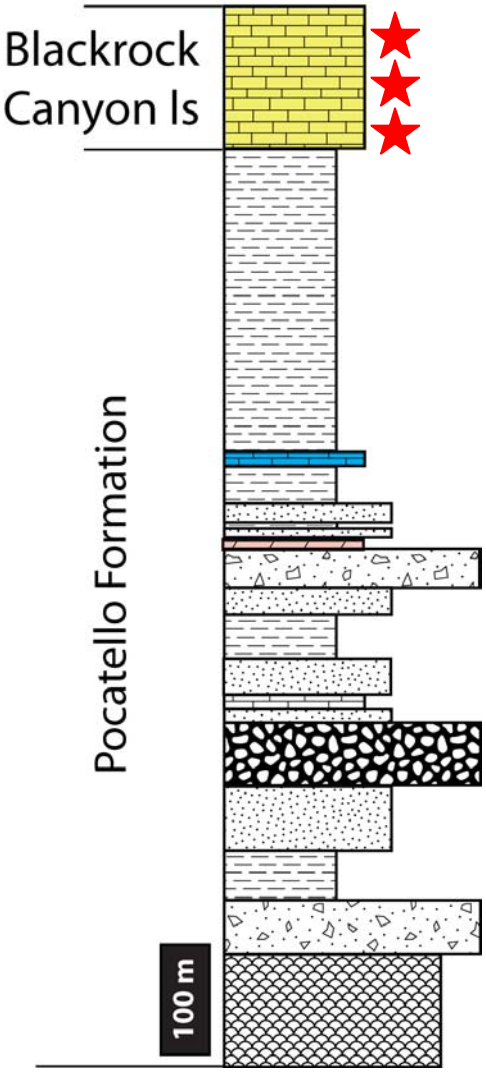
Modified from Yonkee et al., in press

Southern Idaho - “green argillite” (Pocatello Fm.)

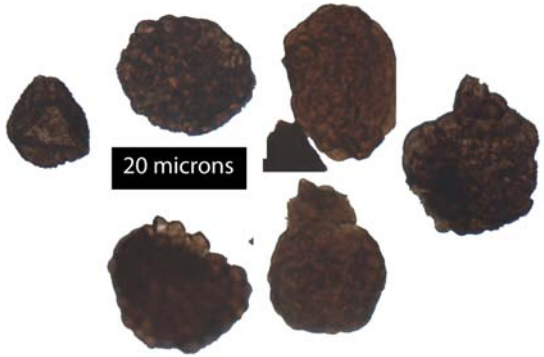


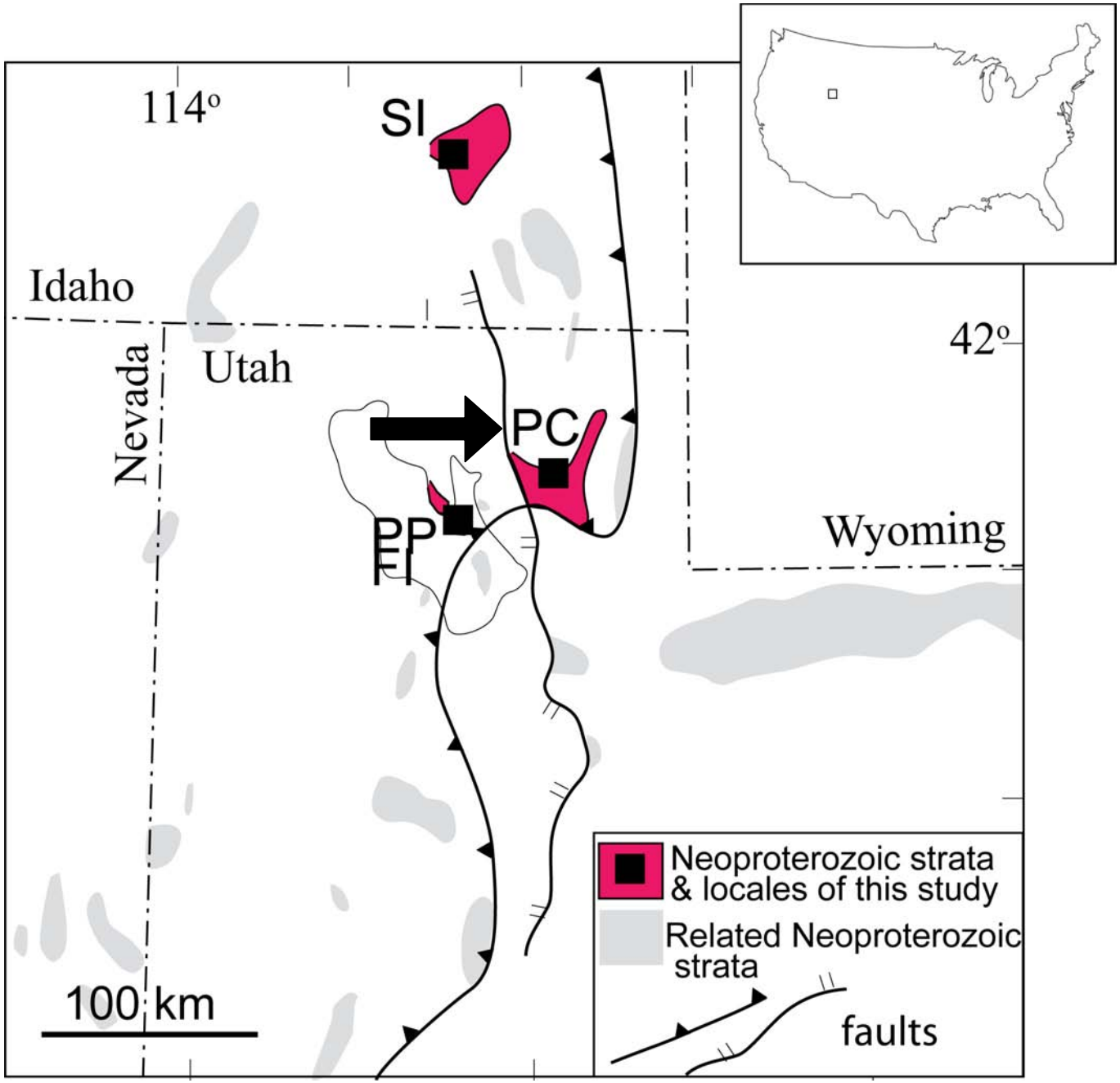
Modified from Link, 1983 and Dehler et al., 2011

Southern Idaho - Blackrock Canyon LS



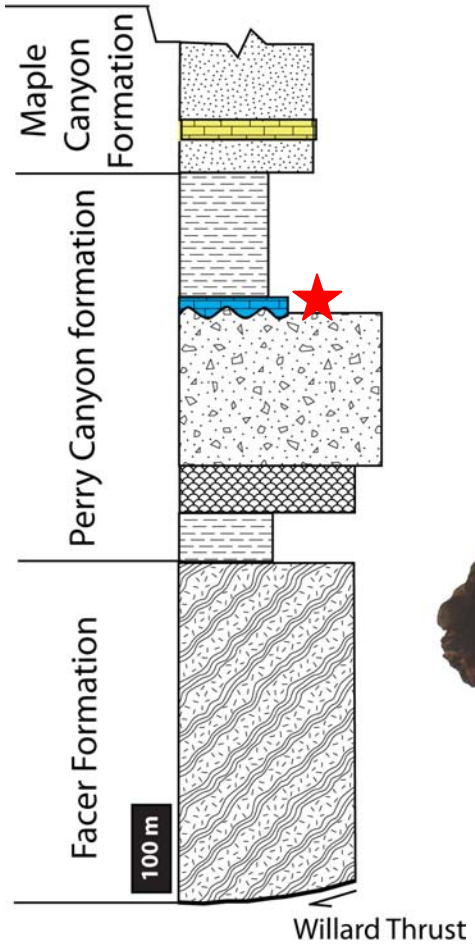
Modified from Link, 1983 and Dehler et al., 2011





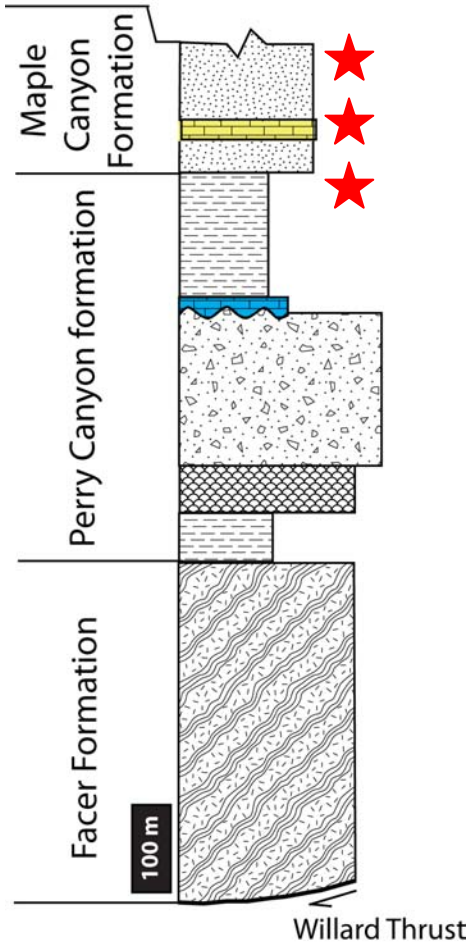
Modified from Yonkee et al., in press

Perry Canyon - “blue limestone” (Maple Canyon Fm.)



Modified from Balgord, 2011

Perry Canyon - “mouth section” (Maple Canyon Fm.)



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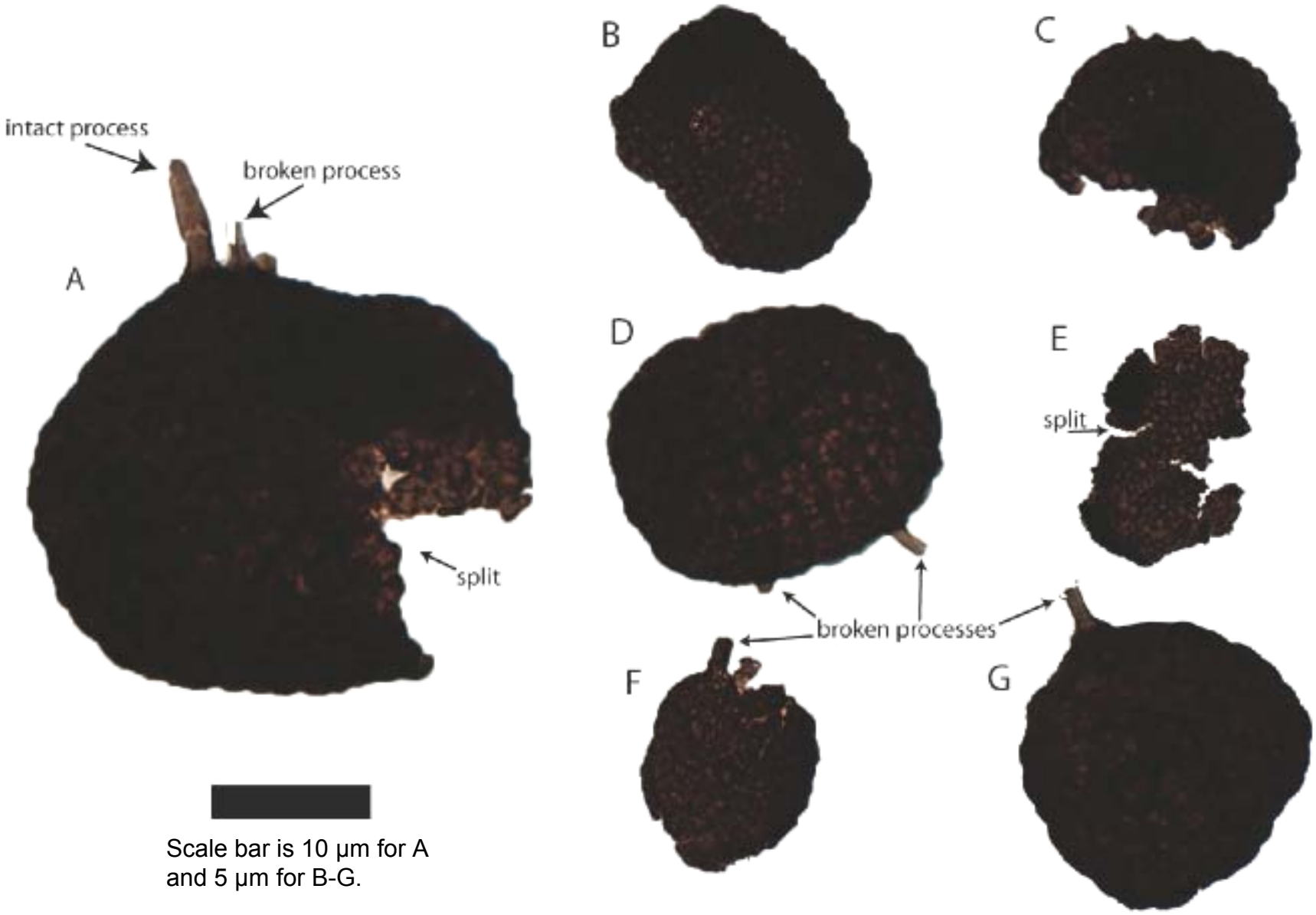

Scale bar is 10 μm for A and 5 μm for B-G.

Conclusions:

- Organic material from late Cryogenian to early Ediacaran argillite *and* carbonate
- Low diversity assemblage from post-glacial strata in western US
- Asymmetrically distributed processes likely indicate actively metabolizing eukaryotes
- How does this compare with other fossil assemblages from the late Neoproterozoic?

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- Paul Link and Adolph Yonkee
- Dawn Hayes
- Gerald Waanders
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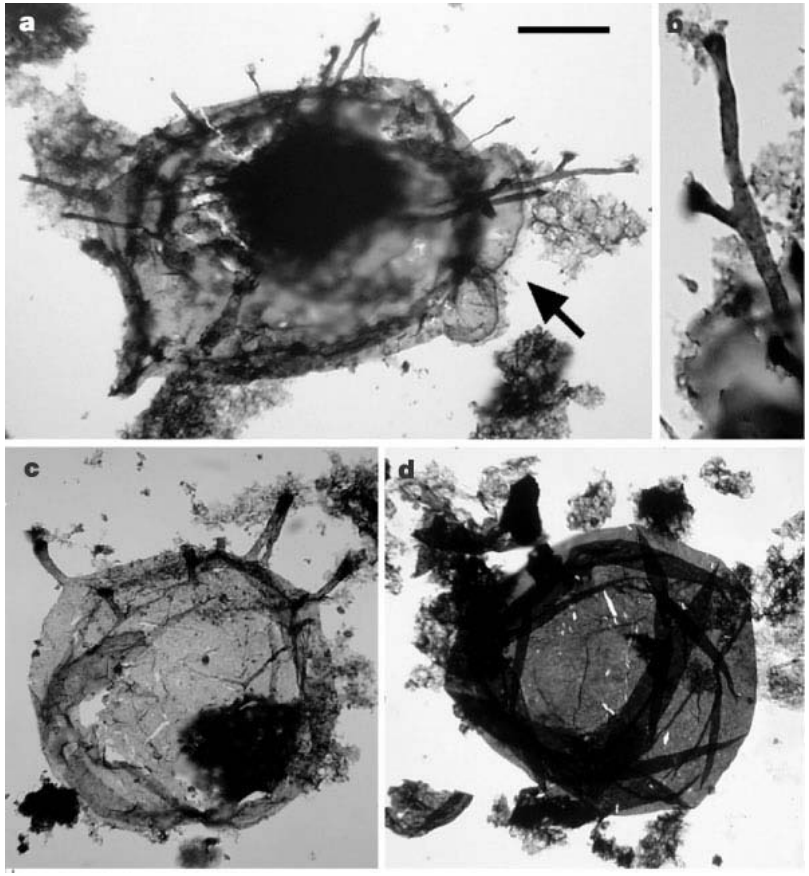
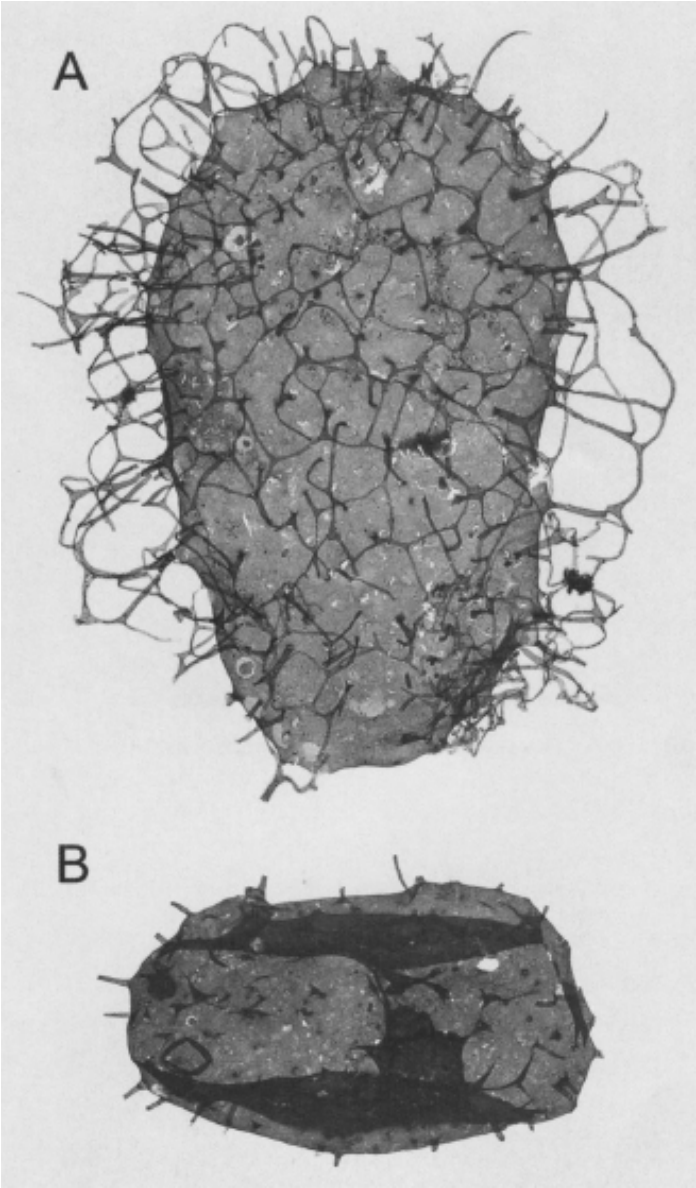
Tappania plana
Javaux et al., 2001



Material from
this study



Tappania sp. interpreted as fungi (Butterfield, 2005)

Material from this study