

**A Day in the Life of the Hudson River Estuary Special Topics Geology Workshops**  
**Tuesday 8/16/16 Lower Hudson & Thursday 8/18/16 Upper Hudson 10:00 AM to 4:00 PM**  
**with Steven Schimmrich, Professor of Geology & Earth Sciences, STEM,**  
**SUNY Ulster County Community College**

**This August we will be offering two opportunities to explore different sections of Hudson River Geology with Steve Schimmrich. Sign up to secure your spot. Car-pooling will be arranged**

\_\_\_\_\_ **Register me - 8/16/16 Geology of the Lower Hudson River from Hudson Highlands to NYC**  
**Day Highlights:**

- **Meet at Bear Mountain Lodge**
- Hudson Highlands - oldest rocks in New York State at over 1 billion years old. Grenville orogeny
- Magnetite iron ore. Historical importance
- Course of river through Highlands. Revolutionary War importance
- Glaciation evidence and effect on river
  
- **Suffern Area**
- Ramapo fault - boundary between Highlands and Newark Rift
- Rifting of Pangea and time of the dinosaurs
- Redbeds of the rift basin
- Widening of river with sedimentary rocks - Haverstraw to Tappan Zee
  
- **Palisades Sill**
- Intrusion of diabase due to rifting
- Erosion to expose Palisades Sill
- Discussion of geology of NYC - Taconic metamorphism

\_\_\_\_\_ **Register me - 8/18 Geology of the Hudson from Hudson Highlands to North Lake, Catskills**  
**Day Highlights:**

- **Meet at Plum Point/Kowawese, New Windsor**
- View of Storm King/Breakneck to south and Newburgh Bay to north
- Width of river related to geology
- Ordovician shales/graywackes and Taconic island arc
  
- **Rosendale / Kingston Area**
- Devonian carbonates & fossils – Helderberg Sea
- Fold-thrust belt deformation – Acadian orogeny
- Karst features – Pompeys Cave
- Rosendale cement industry – Widow Jane Mine
  
- **North/South Lake Escarpment**
- Wall of Manitou – Catskill clastic wedge
- Overview of the Hudson Valley
- Bluestone industry / Hudson River School
- Glaciation evidence

**For each section we will examine:**

- How geology affects course/width/depth of river
- How geology affects sediments/chemistry of river

**Please Sign me up for the session Checked Above: Name** \_\_\_\_\_  
**Summer Email** \_\_\_\_\_ **Phone** \_\_\_\_\_