ES322 Geomorphology – Fall Term 2012 - Journal Reading and Class Presentation Exercise
DUE October 9, 2012

Science is conducted in a variety of ways with a variety of applications. The academic discipline of Geomorphology crosses over many study areas (geology, biology, chemistry, archeology, engineering). One of the primary ways in which scientists communicate is through publication of research in scientific journals. The Journal of Geomorphology is one such publication that is produced by Elsevier Publishers in the Netherlands. This is an international journal dedicated to research in the field of Geomorphology. This exercise involves the following tasks:

(1) students reading a high-level journal article, compiling a list of key words and technical terms,
(2) students defining/explainng the key words using web and instructor resources,
(3) students writing a 1-page summary of the article,
(4) students distributing copies of their key word / explanation lists and summaries to fellow colleagues (email as attachments to Taylor, will be posted on web site for sharing).

The learning objectives include:

(1) familiarization with applications in the sub-discipline of geomorphology,
(2) experience reading scientific journal articles,
(3) encountering, managing, and deciphering technical scientific terms and analytical techniques,
(4) organizing thoughts and presenting written / oral summaries to colleagues.

For this project, the instructor has assembled a sampling of 20 articles recently published in the Journal of Geomorphology. These articles cover a wide range of surface process topics that will be introduced in ES322. The articles are written for technical specialists who have advanced graduate degrees and specialized training in geology/geomorphology. Your goal is to select an article of interest, tackle the language and the science from an introductory perspective, and work your way through summarizing what you've learned from the experience. During this process you will learn as much about what you don't know, as you do.

The following is the list of articles available for students to choose from. Pick one that interests you most, first come, first serve. No duplication of topic! The topic areas include:

Abbühl et al., 2010, El Niño forcing on 10Be-based surface denudation rates in the northwestern Peruvian Andes?: Geomorphology, v. 123, p. 257–268. **(Age dating, surface erosion) (Steve Emerson)**

Alexandrowicz and Margielewski, 2010, Impact of mass movements on geo- and biodiversity in the Polish Outer (Flysch) Carpathians: Geomorphology, v. 123, p. 290–304. **(mass wasting and biogeomorphology) (Greg Helstrom)**

Andreotti et al., 2010, Measurements of the aeolian sand transport saturation length: Geomorphology, v. 123, p. 343-348. **(deserts and wind) (Elizabeth Beckett)**

Böse and Brande, 2010, Landscape history and man-induced landscape changes in the young morainic area of the North European Plain — a case study from the Bäke Valley, Berlin: Geomorphology, v. 122, p. 274–282. **(glaciation and geoarcheology) (Skyler Edmison)**

Cadol and Wohl, 2010, Wood retention and transport in tropical, headwater streams, La Selva Biological Station, Costa Rica: Geomorphology, v. 123, p. 61-73. **(fluvial geomorphology / biogeomorphology) (Jacob Cruser)**

Cheetham et al., 2010, Nonsynchronous, episodic incision: Evidence of threshold exceedance and complex response as controls of terrace formation: Geomorphology, v. 123, p. 320-329. **(fluvial geomorphology) (Kevin Chambers)**

Damm and Hagedorn, 2010, Holocene floodplain formation in the southern Cape region, South Africa: Geomorphology, v. 122, p. 213–222. **(fluvial geomorphology) (Brandon Ginos)**

Duvert et al., 2010, Drivers of erosion and suspended sediment transport in three headwater catchments of the Mexican Central Highlands: Geomorphology, v. 123, p. 243-256. **(fluvial geomorphology) (Chad Harrington)**

Eppes et al., 2010, Cracks in desert pavement rocks: Further insights into mechanical weathering by directional insolation: Geomorphology, v. 123, p. 97-108. **(rock weathering) (Beeb Singson)**

Figueroa and Knott, 2010, Tectonic geomorphology of the southern Sierra Nevada Mountains (California): Evidence for uplift and basin formation: Geomorphology, v. 123, p. 34-45. **(tectonic geomorphology) (Vicki Bergquist)**

Hall and Migoń, 2010, The first stages of erosion by ice sheets: Evidence from central Europe: Geomorphology, v. 123, p. 349-363. **(glacial) (Carlie Bulen)**

Hood, 2010, Delta distributary dynamics in the Skagit River Delta (Washington, USA): Extending, testing, and applying avulsion theory in a tidal system: Geomorphology, v. 123, p. 154-164. **(fluvial geomorphology) (Harry Hill)**

Johnson et al., 2010, Topographic disturbance of subaqueous gravel substrates by signal crayfish (*Pacifastacus leniusculus*): Geomorphology, v. 123, p. 269-278. **(biogeomorphology) (Dave Shields)**

Lytwyn, 2010, Remote sensing and GIS investigation of glacial features in the region of Devil's Lake State Park, South-Central Wisconsin, USA: Geomorphology, v. 123, p. 46-60. **(glacial, remote sensing) (Kathryn Roberts)**

Maeda et al., 2010, Potential impacts of agricultural expansion and climate change on soil erosion in the Eastern Arc Mountains of Kenya: Geomorphology, v. 123, p. 279-289. **(disturbance, climate change) (Symone Stinson)**

Ponza et al., 2010, Thrust-fold activity at the mountain front of the Northern Apennines (Italy) from quantitative landscape analysis: Geomorphology, v. 123, p. 211-231. **(tectonic geomorphology) (Jennifer Maynard)**

Prince et al., 2010, New physical evidence of the role of stream capture in active retreat of the Blue Ridge escarpment, southern Appalachians: Geomorphology, v. 123, p. 305-319. **(landscape evolution) (Marcella Hirchert)**

Rink and Lopez, 2010, OSL-based lateral progradation and aeolian sediment accumulation rates for the Apalachicola Barrier Island Complex, North Gulf of Mexico, Florida: Geomorphology, v. 123, p. 330-342. **(Quaternary dating, eolian process, coastal) (John Green)**

Salinas and López-Blanco, 2010, Geomorphic assessment of the debris avalanche deposit from the Jocotitlán volcano, Central Mexico: Geomorphology, v. 123, p. 142-153. **(mass wasting, debris flow) (Scott Warren)**