Temple Geology Turns 50!

1961-2011
What did the department look like when it got started?

1946-1961

- 1 professor
- A box of rocks
- 3 geology courses
- Dr. Alice Weeks
- 12 courses
- Undergrad major 1962
- Grad degree ~1967
1962-1963 Bulletin

GEOLOGY—Continued

161. **Political Geography.** (3 s. h.) Three hours a week, first semester.
   Associate Professor Haskins
   A study of the principles of political geography and the views of its chief scholars and a study of important political areas and problems.

163. **The Geography of Urban Regions.** (3 s. h.) Three hours a week, second semester.
   (Omitted in 1964-65.)
   A study of the world distribution and functions of urban places and their internal areal differentiation and external relationships.

192. **The Geography of Population.** (2 s. h.) Three hours a week, second semester.
   Assistant Professor Hess
   A survey of the world's population with emphasis on regional growth patterns, densities, and population structure.

GEOLOGY

Professor Weeks, Chairman; Assistant Professor Goodwin and Staff

1-2. **General Geology.** (8 s. h.) Three hours lecture, two hours laboratory a week, first and second semesters.
   Staff
   First semester, physical geology: study of the forces acting upon and within the earth, and of the components of the earth's crust. Second semester, historical geology: the history of the physical development of the earth, and the evolution of the living forms which have populated it. One or two all-day Saturday field trips will be taken each semester.

12. **Introduction to Oceanography.** (3 s. h.) Three hours lecture and discussion a week, second semester.
   Staff
   Prerequisite, Geology 1-2 (or concurrently with Geology 2).
   Origin and characteristics of ocean basins; configuration of the ocean floor; composition and dynamics of sea water; marine sediments.

121. **Mineralogy.** (4 s. h.) Two hours lecture, four hours laboratory a week, first semester.
   Professor Weeks
   Prerequisite, general chemistry or, with special permission, Geology 1-2 and high school chemistry.
   Study of the structure, chemistry, origin and physical properties of minerals; their identification, uses, and geological significance.

122. **Optical Mineralogy.** (4 s. h.) Two hours lecture, four hours laboratory a week, second semester.
   Professor Weeks
   Prerequisites, Geology 121, or a course in general chemistry or general physics.
   Introduction to crystal optics and the petrographic microscope; identification of minerals in immersion liquids and in thin-sections of rocks.

134. **Petroleum.** (4 s. h.) Three hours lecture, two hours laboratory a week.
   Professor Weeks
   Prerequisites, Geology 121 and 122.
   Discussion of the classification, origin and differentiation of igneous rocks, and the formation of metamorphic rocks.

141. **Invertebrate Paleontology.** (4 s. h.) Three hours lecture, two hours laboratory a week, first semester.
   Assistant Professor Goodwin
   Prerequisite, Geology 1-2 or Biology 1-2.
   A general study of fossil invertebrate animals, the environment of fossil life, and the theory of evolution.

142. **Stratigraphy.** (4 s. h.) Three hours lecture, two hours laboratory a week, second semester.
   Assistant Professor Goodwin
   Prerequisite, Geology 1-2.
   Origin and formation of sedimentary rocks; their environment of deposition, stratigraphic relations, and methods of correlation.

144. **Invertebrate Paleontology.** (2 s. h.) Two hours lecture and discussion a week.
   Assistant Professor Goodwin
   (Omitted in 1964-65.)
   Prerequisites, Geology 1-2, 141, and 142.
   Reconstruction of the relationship between fossil invertebrates and their environments; emphasis on principles and their application to selected groups of invertebrates.

151. **Structural Geology.** (4 s. h.) Three hours lecture, two hours laboratory a week, first semester.
   Staff
   Prerequisite, Geology 1-2.
   Discussion of the structures of igneous, sedimentary, and metamorphic rocks, the relation of distribution of rock types to crustal deformation, and the major structural features of the earth's crust.

152. **Field Geology.** (4 s. h.) One hour lecture, six hours laboratory or field work a week, second semester.
   Staff
   Prerequisite, Geology 151.
   Study of geological field methods and experience in geologic mapping and in the solution of stratigraphic, structural, and petrologic problems in the field.

154. **Geophysics.** (3 s. h.) Three hours lecture and discussion a week, second semester.
   Staff
   Prerequisites, Geology 1-2 and general physics.
   Principles of physics applied to a study of the earth's shape, magnetic and gravitational fields, internal temperature and composition.

161. **Geochemistry.** (4 s. h.) Three hours lecture, two hours laboratory a week, first semester.
   Professor Weeks
   Prerequisites, Geology 1-2 and 121, or general chemistry.
   Study of the distribution of elements in the earth, and the processes controlling their transport and redistribution in the lithosphere, hydrosphere, and atmosphere.
Here is how the department grew
Faculty history

- From 1961-1973 grew from 1 to 8 full time faculty members
- On average our faculty have stayed 25 years
- The longest staying member has been 41 years (and counting, keep on trucking Dr Myer!)
- Expanding to 9+ members in the near future
Student history

- By 1969 9 BA students
- 1997 Env Sci degree approved
- Today about 40 Geology and 80 Environmental Science undergrads
- 1969 “first” MA Geology
- Since 1973, 4-6 MA or MS/year

Geology Club

- Founded 1967
- Founded again 2002

Elevator at the Smithsonian

Fossil hunt, cave exploring on geology group’s agenda
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<tr>
<th>Then</th>
<th>Now</th>
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<tr>
<td>Undergraduate education included both majors and non-majors</td>
<td>Undergraduate education of majors and non-majors still important</td>
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<td>Non major classes were huge, 1000-2000 students total</td>
<td>Many sections of gened classes, always full, 1000+ students per semester</td>
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<td>Advisors worked closely with graduate students on field oriented research</td>
<td>Masters students are still doing field research with their advisors</td>
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<td>Field trips were an important aspect of instruction, geology club, and the community feel of the department</td>
<td>Field trips are still one of the hallmarks of the department</td>
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Then & Now
Alice Weeks, our founder

■ 1909-1988
■ BS Math Tufts University, 1930
■ MS Geology Harvard/Radcliffe 1934
■ Worked to earn money for PhD which was awarded in 1949
Alice Weeks, our founder

- Taught at Wellesley College
- Drafted figures for Dana’s mineralogy
- USGS 1949-1961
  Uranium exploration
- Temple University, 1962-1976, founded department
- Internationally recognized scientist
  Named in 1955 American Men in Science

- Weeksite named for her
- $K_2(UO_2)_2-(Si_2O_5)_3-4H_2O$
Alice Mary Dowse Weeks

- Married Albert Weeks in 1950 while she was still working at USGS and he was at Sun Oil in Philadelphia
- Strong supporter of women in geology & Science
- Early officer of Philadelphia Geological Society
- Grew our dept from 1 to 8 faculty
- Left an Endowed Chair for our department (Albert B and Alice M Weeks Endowed Chair in Environmental Geology)