The Case for Geosciences

Geology is something that is not just important to me, it is important to humanity as a whole.

The processes which affect the earth and the understanding of these processes have been critical to the advancement of our species. The massive amount of energy required to power a modern economy and therefore the high quality of living available for many people is primarily acquired from petroleum reserves. The technology that we use every day and sometimes take for granted are possible because the materials needed for their production can be acquired by mining important minerals. Much of the water we need for drinking and agriculture is acquired from naturally occurring acquifers. The earth has provided all the resources we need to thrived and flourish and the importance of understanding these processes cannot be understated.

A better understanding of geology will allow us to better predict naturally occurring events which are threatening to civilizations. Earthquakes and volcanoes can be devastating to the people near where they occur. A more comprehensive understanding of the mechanisms responsible for these events may allow us to better predict when and where they will occur, limiting the amount of devastation they would have otherwise inflicted.

Our understanding of the geology of the earth is now also being applied to the next frontier, space. Planetary geology has the potential to help allow our species to explore and possibly inhabit other regions of space by using the same principles that we apply here on earth. There is great potential in space exploration but only if we can find and exploit the materials needed on other planetary bodies.

The importance of geology is not limited to the list presented here. There are many other aspects of geology which are important to us and are endlessly fascinating. It is for these reasons and because I find the science captivating that I am motivated to pursue geology as a career, so that I can contribute some small part to the understanding of our [planetary] home and potential homes.

Excerpts from Tyler Tripplehorn, March, 2014