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Why Natural History Matters

Vaccines, sequencing genomes, and new antibiotics are the goals of biology these days, and thus the funding is directed toward subjects like Genetics, Microbiology, Biochemistry, and Neuroscience, which focus on everything invisible to the naked eye. This progression towards the molecular level is not surprising in the least; with the pressing urgency of the medical field and so many diseases to be cured, it only seems natural and necessary.

But how is all of this molecular science possible? It was only possible to start inquiring into molecular science through the existence of natural history, which is the connection between natural systems including communities, species, and the earth (Natural History Museum of *IM* Angeles County). Natural History is not only the study of the earth's dynamic past, but it includes the evolution of knowledge about that past and how it is *applied to modern biology. Without natural history, discovering vaccines, sequencing the human genome, and finding antibiotics would not be possible. In short, the molecular focus of today would not be possible without natural history because it gives us context in which to study these molecular areas of biology.

Context gives a framework in which to see the world. Perhaps the most obvious and important production of natural history is evolution as observed and proposed by Darwin at the, phenotypic level. It was this discovery at the visible level that gave a context in which the molecular fields of science can be studied. We must understand evolution in order to win the "evolutionary race" against pathogenic bacteria by discovering new antibiotics. Natural History not only gives a context in which to study the molecular level, but the molecular level gives back to natural history. Evolution allows for a close study of the similarities at the molecular level between protein orthologues and paralogues, which allows for evolutionary history of protein molecules to be traced, and further illuminates the interconnections of the world's evolutionary past. Natural history has given us a frame so that we can look at the world through a molecular window. However, stating that natural history has given a context is to imply that it has done its job and is no longer useful as an active science but only holds its importance in what it has already provided. A context must never be static, but instead must be dynamic. Natural history must be pursued and supported actively so it can continue to inform the progressive world of science that relies on it

Even so, stating that natural history provides a context is not enough to explain why natural history matters because it implies that natural history has no inherent worth. The study of the interactions between organisms as in ecology informs us, as scientists to how we may best conserve our natural world and the environment, which is perhaps the best good that natural history can give. After studying monarch butterflies and being part of a wide conservation effort to save the species, I have seen what power natural history itself holds. It has the power to inform, which calls us to take action and create change in the world. Natural history's past continues to inform not only other branches of science but also its own future, which is the most important endeavor of modern science.

Works Cited

Natural History Museum of Los Angeles County. 2007. 8 Feb 2008

<<http://www.nhm.org/information/aboutus.htm>>