

Mummies and teaching: where do we stand?

Short communication

Mummies are appealing. Over the last two decades, there have been several international conferences dealing with this subject, as well as many undergraduate and graduate courses have been created to deal with the growing popularity of bioarchaeology and forensic sciences, aside from professors' initiative to work their way on the tenure track.¹ This trend seems to be universal, and a testimony of this is the 9th World Congress on Mummy Studies recently held in Lima, Peru (August 10 - 13, 2016: www.mummycongress.pe). But, is this trend sustainable? It seems unlikely students could all work in a field with very limited access to preserved ancient human or animal bodies, particularly the famous Egyptian or South American mummies.² Nevertheless, there are a few but strong reasons to consider this tendency still a healthy one.

The first is that the availability of these 'organic time capsules', both animal and human, are the only sources of molecules and other biological information of complete ecological relevance originated from ancient times.

Therefore, any studies dealing with time perspectives could easily relate to these prime sources. Their scarcity will never become a reason not to pursue such chronologically oriented purposes.

Another reason is that increasing specificity and sensibility of lab techniques is always on the rise, and testing these accuracies could always be seen in the very positive limelight of mummy studies. If a test can prove the presence of an obscure pathogen in a very old mummy, no doubt it would definitely work wonders among living subjects. Egyptian mummies, due to their chemical treatment, are famous also for being difficult to yield a DNA, for instance, in contrast to naturally created ones. Such limitation becomes a profitable challenge to develop newer techniques and lab procedures in paleogenetics that even deal with such complex areas as biomes, proteomes and genomics.³

This approach also permeates all forensic fields. Researchers from different cooperating fields, working together can successfully solve a crime from hundreds and even thousands of years ago (multidisciplinary is the rule in mummy studies); therefore, their experiences should immediately become examples to learn from and follow. This also applies even to archaeological contexts and particular objects, although never with the fascination of solving the mysteries of the ancient Egyptian royals. Mummy researchers are often asked about the value of their work. Does it help people now? Besides being merely 'interesting', mummy studies are proving some long held ideas about common diseases were not as sound as they looked. TB existed in the Americas before the Europeans arrived, but we only recently learned, thanks to mummy studies, that it had originated from the sea lions 'strain'.⁴

Atherosclerosis, a commonly found condition among adults from around the world, and a leading factor associated to their eventual deaths, has been found not to relate directly to modern lifestyles, as commonly held until very recently. Its prevalence was surprisingly as high among ancient populations, as demonstrated by CT - scanning studies performed on hundreds of ancient mummies from different

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cultures around the world.⁵ Therefore, which other misconceptions could we still hold about other, perhaps, very common conditions? Mummies and mummy studies should, therefore, help us test our long held theories.

All in all, the cooperation of biotechnology oriented universities and mummy collections, both from museums and the field, should keep cooperating in the development of programs dealing with mummies; both to help us learn more about long gone civilizations, as well as to develop newer information to test the living and to understand better the interaction of all pathologies with us humans from an evolutionary, chronological standpoint. Different governmental levels and clear policies should facilitate this cooperation, ranging from local, provincial ones to international partnerships, particularly when dealing with challenging developing world conditions. To conclude, the future looks bright for mummy studies; provided conflicts and bureaucracy don't get in their way, new discoveries and revelations should keep coming.

Acknowledgments

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Conflicts of interest

None.

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