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Geoarchaeological Investigation along the Tambo-Ilo Coast, Peru
(Field Report)

My research in Peru took place from June 18 – August 21. Due to complications with the Instituto Nacional de Cultura (INC), excavations were unable to occur, so our objectives were changed for these circumstances. At TI-185 (now named Cola de Zorro), surface survey was profitable in acquiring data on the diversity of geologic material. In addition, systematic survey of the local geology showed what material was available for use in the creation of buildings and lithic tools. Contact with Peruvian archaeologist Adan Umire proved helpful in locating a large geologic source of material near the coastal town of Ilo (base of operations). Excavating Cola de Zorro would have provided a suitable amount of lithic types and projectile points for analysis on the general characteristics of material for the area. Since this was not possible, I traveled up to Moquegua, to the Museo Contisuyo to analyze all lithic material collected during Prof. Zaro's 2006 field survey along the Tambo-Ilo coast.

Throughout the field season the INC plagued use with delays. Initially, they wanted minor revisions done to the excavation prospectus, from additional illustrations to small things like UTM gridlines on all maps. Since no set guidelines or standards were in place prior to submission, there was no way of knowing that these additions were needed and in previous years they were not. Once completed and in working order, the INC then told us that we needed a letter from the US embassy stating that the work we would be doing was legitimate. We went through the necessary steps and had the letter sent off to the INC. Finally, with everything in place we were told that the chair of the INC had stepped down and we could not excavate until after a new chairperson was appointed. When the new chair was appointed, they were backed up with paperwork and had no time to sign our permit. Being told to call back tomorrow was a daily event, until it became late in our field season. With only two weeks left, we called up the INC and cancelled our permit, with the available time left it would have not been worth the money to excavate, in addition to the small amount excavation that could be completed within the timeframe. However, this did not stop us from doing other "projects" while we waited for the INC.

At the beginning of July, geology professor Martin Yates joined us for the identification of local rock types. To make our systematic survey of the local geology run smoothly, we created identification sheets that described each rock type. Therefore, only one sheet was needed per rock and any further recurrence of that rock would be

delineated by its names and not its physical characteristics, this saved on time and unnecessary repetition (initial work in progress of publishing this in the Journal of *Geoarchaeology*). Two surveys were completed, one within the drainage at Cola de Zorro and the other on the surface near the site. The local geology was predominately granite with other materials making up a small percentage. This material was used for the construction of terraces, canals, and dwellings. For lithic tools, granite was used to make grinding stones and fishing weights, but not projectile points due to its coarse nature. Material used for projectile points at Cola de Zorro was cryptocrystalline quartz, andesite, and chert, with the majority being the latter.

Brief communication with Adán Umire (Peruvian archaeologist) revealed a sizable source of chert roughly 25km northeast of Ilo, at Quebrada Honda. We investigated this lead and surveyed the area for extent of the source, quality of material and size. Following the highway the chert could be found for a distance of approximately 3km, with quality and size being quite usable in the creation of lithic tools. All material surveyed looked to be naturally and not culturally broken, meaning if people did use this material for tools they carried the material back to their site and did not do any reduction at the source. Furthermore, some of the chert found at Cola de Zorro resembled that at Quebrada Honda, however without chemical testing and analysis one cannot say for certain.

My analysis of Prof. Zaro's lithics from the 2006 field season proved quite useful, in understanding of lithic material across the Tambo-Ilo coast. This provided information about the characteristics of projectile points and the material used to produce them on a regional scale, which then the material used can be compared to that of the local geology and similarities can be found both in rock and projectile point types. This could not have been attained from the analysis of material recovered from the excavation at Cola de Zorro, at least not on a regional scale.

The 2007 field season, provided myself with a sizable amount of information that will continue to be analyzed in order to gain a better understanding on the geologic resource management along the south coast of Peru. With the help of Prof. Yates and Prof. Zaro, a clearer grasp of the environment and people's lifeways in the region will emerge. Even with the adversities of the INC, this summer's fieldwork was successful in gaining the necessary information needed to write my master's thesis and in some aspects better than originally planned.