Gregory S. ALDRETE and Scott BARTELL

The *Linothorax* Project: Investigating the Construction and Protective Properties of Ancient Greek Linen Body Armor

One of the most common forms of protection used by both ancient Greek and Macedonian warriors was the *linothorax*, a type of body armor fashioned by laminating together layers of linen. While we know quite a lot about other types of ancient armor made from metal because specimens have been excavated, the *linothorax* remains something of a mystery since, due to the inherently perishable nature of its material, no examples have survived. Today, the *linothorax* is only known through literary descriptions and iconographic depictions in mosaics, vase paintings, and sculptural reliefs. Adding to its inscrutability is the fact that it is hard to imagine how something made of cloth could provide effective protection to its wearer. Despite this, it clearly thrived as a form of body protection for nearly 1,000 years and appears to have been the armor of choice for Alexander's troops, certainly one of the most successful armies of the ancient world.

Our project explores this mystery. Basing our work on the available literary and artistic sources, we built several replicas of a *linothorax*. Also, employing only the materials and techniques that would have been available to the ancient Greeks and Macedonians, we constructed a number of sample patches using different possible combinations of fabrics, glues, thicknesses, and weave orientation. These patches were then subjected to a series of field tests to precisely determine how effective this armor would have been in protecting its wearer from common battlefield hazards, especially arrows. Our research suggests that the long reign of the *linothorax* on the ancient battlefield may be due to its surprising effectiveness as protection and to additional positive qualities that only emerge when it is worn.

In this unusual form of APA workshop, the initial presentation will summarize our project and its main findings in a traditional lecture format, the Demonstration Session will provide a firsthand opportunity to inspect a *linothorax* and to examine the test samples, and the Construction Session will illustrate the actual construction techniques and even allow interested attendees to try them out themselves.