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Fact Sheet

Forensic Reconstruction

Until fairly recently, the story of early colonists in America could only be pieced together from historical documents and artifacts. However, the combination of forensic science, anthropology, osteology, anatomy and artistry offer a new tool in learning about these people—forensic reconstruction.

Five facial reconstructions and two life-size figures of people who lived in the colonial Chesapeake region approximately 400 years ago are on view for the first time in the “Written in Bone: Forensic Files of the 17th-Century Chesapeake” exhibition at the Smithsonian’s National Museum of Natural History. They were sculpted by Studio EIS and forensic artists Amanda Danning, Joanna Hughes and Sharon Long and took more than two years to complete. Their clothing and hairstyles are based on historical interpretations of the time period.

Recreating the physical likeness of people by using their skeletal remains is a valuable tool for historians. Forensic reconstruction is especially useful in constructing a replica of a person’s facial features. The skull provides many clues about a person’s appearance. The brow ridge, the distance between the eye sockets, the shape of the nasal chamber, the shape and projection of the nasal bones, the chin’s form and the overall profile of the facial bones all influence facial features in life. Using these bones, forensic anthropologists and artists work together to reconstruct the appearance of an individual.

A trained sculptor, who is familiar with facial anatomy, works with a forensic anthropologist and uses clay to build the facial features. The forensic anthropologist interprets skeletal features to determine the subject’s age, gender and ancestry, and evaluates anatomical characteristics such as facial asymmetry, evidence of injuries (a broken nose, for example) and loss of teeth before death.

The finished product only approximates the actual appearance, however, because the skull does not reflect the details of soft tissues such as eye, hair and skin color; facial hair; the shape of the lips; or how much fat tissue covered the bone. Yet, facial reconstruction can put a name on an unidentified body in a modern forensic case, or, in an archaeological investigation, a face on history.

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