

The Identification of US POWs and MIAs from the Korean War Via the Recovery and Digitization of Deteriorated Acetate X-rays

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Abstract

Recently the US Department of Defense's Central Identification Laboratory (JPAC-CIL) developed the capability to use induction chest radiographs to identify skeletal remains of US unaccounted-for soldiers from the Korean War. Most of these radiographs are >60 years old and approximately one sixth of those representing unaccounted-for persons had deteriorated as a consequence of vinegar syndrome and prolonged storage at the National Archives and Records Administration. In 2010, the JPAC-CIL and the Chicago Albumen Works (CAW) developed a collaboration to rejuvenate these deteriorated radiographs to augment and maximize the identification effort. Not only were photofluorographs coated on unstable

safety film, but so too were full-size (14x17") double radiographic emulsions, and the question JPAC had for CAW was: could it recover these images as well? The question was answered in the affirmative in the Spring of 2010 and since then the aesthetic and historical value of just over one thousand radiographs has been reinstated. This presentation describes the recovery techniques that were used to process these and extremely challenging films and illustrates, using several case examples, the value chest radiograph comparison methods using these images holds for identification above mitochondrial DNA. For photo conservation, it is a unique story that carries immense community value.