

## ANTHROPOLOGY

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## Undocumented Border Crosser Deaths in Arizona: Expanding Intrastate Collaborative Efforts in Identification\*

**ABSTRACT:** Undocumented Border Crosser (UBC) deaths in Arizona are a major issue faced by medicolegal authorities. Currently, the Maricopa County Office of the Medical Examiner (MCOME) is in possession of over two hundred unidentified individuals, more than half of whom are presumed to be UBCs. The primary goal of this study was to address the growing number of UBC deaths in Maricopa County in order to provide a more comprehensive picture of this important anthropological issue within the state of Arizona. Of the 107 total UBC cases evaluated for the study, the majority were male and age estimates for all individuals were between 15 to 60 years old. Modeled after the recording system established by the Pima County Office of the Medical Examiner, the biographic and geographic data for these cases were entered into a new UBC database at MCOME and later added to the online Map of Migrant Mortality.

**KEYWORDS:** forensic science, forensic anthropology, Undocumented Border Crosser (UBC), Maricopa County Office of the Medical Examiner, identification, Arizona

This study will examine the recent efforts made by the Maricopa County Office of the Medical Examiner (MCOME) in Phoenix, Arizona, to address the significant issue of identifying undocumented border crossers dying within the county lines. While the efforts and methods presented below have not previously been reported, the MCOME has been actively documenting the deaths of foreign nationals since the early 1980s. Throughout this study, we employ the Binational Migration Institute's 2013 definition of an "Undocumented Border Crosser," or UBC, which refers to a foreign-born, non-U.S. citizen who was actively crossing the border without the permission of the United States government (1).

The goals of this research initiative were threefold. First, at the broadest level, this project aimed to establish a more cohesive accounting of UBC deaths and open the lines of communication between two counties in the southern half of Arizona: Pima and Maricopa. Second, the authors sought to implement changes in the data recording methods previously employed at the MCOME in order to align these methods more directly with those used in Pima County. Finally, the authors wanted to create a working database to facilitate the mapping of UBC deaths in

Maricopa County onto the Map of Migrant Mortality developed in Pima County. By mapping these deaths, the authors were able to extend the visual documentation of UBC deaths farther north into Arizona.

This research was inspired by the 2014 AAFS Symposium entitled "Medico-legal Investigation of Migrant Deaths." As previously reported at this symposium, the issue of UBC deaths in Arizona is a growing concern, largely reinforced by U.S. border enforcement policies which make crossing increasingly difficult and dangerous (2). This study will supplement data presented by the Pima County Medical Examiner's Office (PCOME) at this symposium (2–8) and will illustrate the growing number of UBC deaths occurring north and west of Pima County, thereby providing a more comprehensive picture of this important anthropological issue within the state of Arizona.

### Border Crossing in Arizona

Attempting to cross the United States–Mexico border has become more dangerous in recent decades. Increased border fortifications constructed in the 1990s and 2000s (Fig. 1) have led to the development of a "funnel effect" that pushes migrants into the inhospitable Arizona Sonoran Desert (9,10). These so-called prevention-through deterrence methods intentionally redirected hundreds of thousands of unauthorized migrants away from previously busy crossing points in California and Texas and therefore into Arizona's more deadly terrain (9), specifically the region designated by U.S. Border Patrol as the Tucson Sector.

The Tucson Sector covers approximately 90,000 square miles of land encompassing most of the state of Arizona (12 of the 15 counties) (personal communication with U.S. Border Patrol

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FIG. 1—The border wall between the United States and Mexico and the surrounding Sonoran Desert. Image taken in May 2014 when the first three authors visited Nogales, Arizona, with U.S. Border Patrol. [Color figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

personnel on April 18, 2016). The Tucson Sector is responsible for securing 262 linear miles of the United States–Mexico border between the New Mexico state line and the Yuma County line, making it the fourth largest border area in the southwest (11) (Figs 2 and 3). According to the U.S. Border Patrol’s Web site, the Tucson Sector is one of the busiest in the country with the most apprehensions of individuals and the highest rate of marijuana seizures (11). The Tucson Sector is responsible for approximately 20% of apprehensions and 50% of narcotics seized, nationwide (personal communication with U.S. Border Patrol personnel on April 18, 2016).

As a result of this “funnel effect,” thousands of foreign nationals have died during their attempts to cross the United States–Mexico border through Arizona, specifically in the Tucson Sector. The recorded frequency of border crosser deaths in the Tucson Sector was the highest across the nine southwest border sectors from 1998 until 2013 (12). In 2014 and 2015, the Rio Grande Valley Sector in Texas saw the highest number of deaths along the southwest border—8% and 41.5% higher per year, respectively, when compared to the Tucson Sector (12).

The U.S. Border Patrol reported that for the 2015 fiscal year (October 1 through September 30), they apprehended 63,397 individuals crossing the U.S. border within the Tucson Sector (13). Of these 63,397 individuals, 48,916 were of Mexican nationality, 55,080 individuals were male, and 55,715 were adults (older than 17 years of age). Among the 7,682 juveniles apprehended, only 1,663 were accompanied by an adult, leaving 6,019 unaccompanied children attempting to cross the Sonoran Desert and the border (13). In a comparison between fiscal years 2015 and 2016 (exclusively from October 1 through January 31), the Tucson Sector reported a 35% increase in unaccompanied children crossing the border (1,849 in 2015 to 2,492 in 2016) (14).

For fiscal year 2015, U.S. Border Patrol reported only 63 deaths in the Tucson Sector (12). This was the lowest reported number of deaths in this sector in 15 years. Between fiscal years 1998 and 2015, the average number of deaths in the Tucson Sector reported by Border Patrol was 143; the fewest deaths (11 individuals) was reported in 1998 and the most deaths in 2010 (251 individuals) (12). However, it is unclear how the U.S.

Border Patrol counts the number of deaths, and perhaps they are not accounting for individuals whose remains end up in medical examiner’s offices. For example, Bird (15) reported that in the Arizona Sonoran Desert, more than 2,200 remains of suspected foreign nationals were found between 2000 and 2015. Similarly, a publication by the Binational Migration Institute stated that PCOME alone has analyzed the bodies of more than 2,000 men, women, and children found in the desert along the United States–Mexico border (16). Compounding the tragedy of thousands of deaths is the fact that the majority of migrants are undocumented and unidentified which prohibits the repatriation of the human remains to family members in foreign countries.

### UBCs in Maricopa County

Although the actual number of UBC deaths is not known as many individuals’ remains are never recovered (1), the number of UBC deaths analyzed in medical examiner’s offices across Arizona continues to increase. In Maricopa County, the number of UBC deaths is not nearly as high as in the more southern Pima County; however, the MCOME is currently legally responsible for more than two hundred unidentified individuals, more than half of whom are presumed to be UBCs.

In Maricopa County, the number of UBC deaths analyzed at the MCOME more than doubled from 2009 to 2013. As of the writing of this article, the MCOME has records pertaining to 107 unidentified UBCs dating between the years 1981 and 2015. The attempts to identify these UBCs have been challenging, however. From the early 1980s to the mid-2000s, the identification rate of UBCs at MCOME was low: approximately 15–30%. This low identification rate was primarily due to the limits of technology (i.e., DNA analysis) and limited interagency communication. Previously, the majority of identifications were made through fingerprint matching, but if a decedent was unable to be fingerprinted, or a match was not made, the case would go cold and would later be closed.

As the number of UBC cases handled by the MCOME increased in the late 2000s, changes were enacted to more effectively address the situation. With advances in DNA technology, the Combined DNA Index System (CODIS), and increased collaborative efforts between the MCOME and law enforcement agencies, consular offices, and other medical examiner’s offices, the identification rate of UBCs has dramatically increased. Additionally, in 2009, the MCOME added a new Unidentified Decedent Coordinator position to effectively track and pursue cases of unidentified individuals so that every effort is put forth to achieve an identification. With these changes implemented, a dramatic increase in MCOME UBC identifications began in 2013. Between 2013 and 2015, MCOME processed 505 unidentified individuals; of that number, 65 were UBCs, and of those, 43 individuals (66%) were identified. When assessed per year, 65% of UBCs were successfully identified in 2013, 61% in 2014, and 72% in 2015.

### Materials and Methods

The primary goal of this research was to create a working database of UBC deaths investigated by MCOME between the years 1981 and 2015. Using the PCOME recording system as a model (10), the first two authors established criteria for inclusion into the UBC database at MCOME. These criteria specified that an individual must be found in a desert area (not within the city limits), their biological profile must indicate potential Hispanic

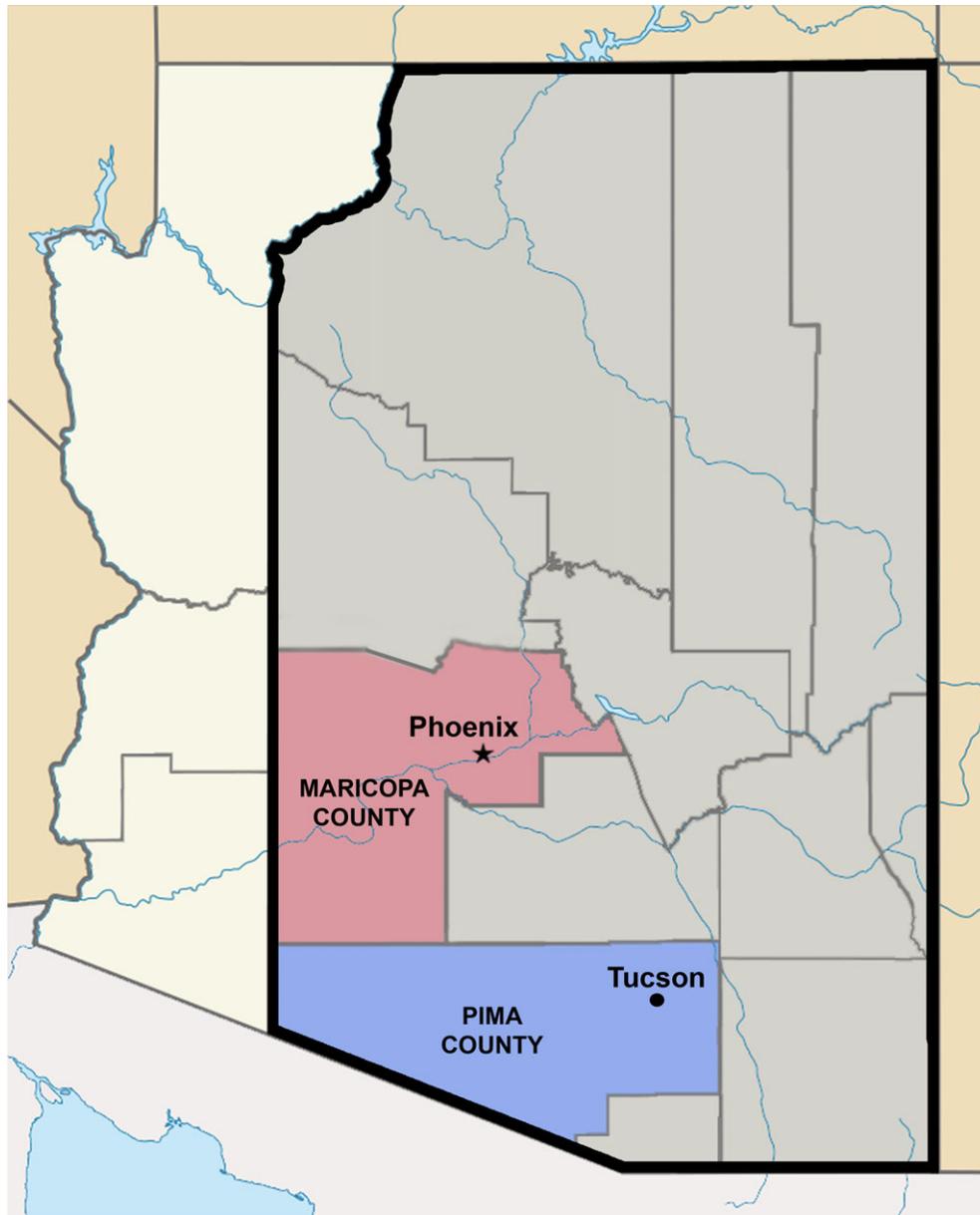


FIG. 2—Map of Arizona indicating the Tucson Sector (shaded in gray within the thick black border) with Maricopa and Pima counties indicated within the sector. The Tucson Sector includes 12 of Arizona's 15 counties. [Color figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

ancestral origin, and/or cultural artifacts found with the decedent must indicate Mexican, Central American, or South American origin. The first two authors reviewed approximately 200 MCOME case files of unidentified individuals (both foreign nationals and U.S. citizens). The case files were a combination of paper and digital forms and medical examiner autopsy reports. In some instances, information on body condition was obtained from photographs of the decedent(s).

Upon complete review of the information in each case file, these authors determined whether the individual, and the location of the body, was consistent with the UBC definition provided above. Once cases were classified as potential UBCs, the following data were collected based on the specifications provided by Dr. John Chamblee, Research Chair of the Humane Borders', Inc. "Arizona OpenGIS for Deceased Migrants" Project: age at death, sex, date of death/recovery, cause of death, body condition, presumptive identification (i.e., identification cards found

on the body), location description of where the body was found including GPS X and Y coordinates, and any related case numbers (i.e., individuals traveling in a group). Data were collected for 107 probable UBC cases; 100 UBC cases were assessed by the first two authors in May of 2014, and an additional seven individuals were added as the third author continued to collect UBC data between June 2014 and August 2015.

The "Arizona OpenGIS for Deceased Migrants" Project is a free GIS-based tool containing spatial data related to migrant deaths. The collaborative efforts of the Humane Borders Project and the PCOME have resulted in the Map of Migrant Mortality (<http://www.humaneborders.info/>), a map depicting migrant deaths in Arizona (Fig. 4). The Map of Migrant Mortality is useful for medical examiner's offices and Border Patrol, as well as families looking for missing loved ones. The Web site allows users to query using a number of personal identifiers, including decedent name, gender, year of death, cause of death, county of



Sector Name	States Covered	Linear Border Miles*	Total Square Miles*
San Diego	California	60	56,831
El Centro	California	71	410
Yuma	Arizona, California, Nevada	126	181,670
Laredo	Texas	171	101,439
Del Rio	Texas	210	59,541
Tucson	Arizona	262	90,000
El Paso	New Mexico, Texas	268	125,500
Rio Grande Valley	Texas	320	34,000
Big Bend	Texas, Oklahoma	510	165,154

\* Approximate miles, as stated on U.S. Border Patrol's website (April 2016)

FIG. 3—United States map indicating the Border Patrol sectors. There are nine sectors in the country's southwest region that share the border with Mexico. The table provides details about the nine southwest sectors which are ranked (smallest to largest) by linear border miles. The Tucson Sector has the fourth highest border miles (sources: map from Wikimedia Commons via U.S. Customs and Border Patrol; data from: <https://www.cbp.gov/border-security/along-us-borders/border-patrol-sectors>). [Color figure can be viewed at wileyonlinelibrary.com]

discovery, and regionally defined landmarks at the location of death.

The Map of Migrant Mortality was presented at the 2014 AAFS Symposium (3) and provided an excellent visualization of UBC deaths in Pima and Pinal counties, Arizona; however, the map did not include MCOME data indicating the numerous UBC deaths within the Maricopa County lines (Fig. 5). Rather than the Pima–Maricopa county line signifying an end to the migration routes, or the northern limits of UBC deaths, the map was instead reflecting a lack of communication between the counties' medical examiners offices.

After the symposium, it became abundantly clear that Maricopa County must begin to use this resource in an attempt to increase their rate of UBC identifications and to visually demonstrate the northern extent of migration. Therefore, one of the goals of this research project was to incorporate Maricopa County's UBC death data into the Map of Migrant Mortality. The aforementioned data values were thus used to design the UBC database for MCOME, were collected for each MCOME UBC case, and were subsequently submitted to Dr. Chamblee for inclusion in the Map of Migrant Mortality.

## Results

The general trend in UBC cases indicates a gradual increase in number from 1981 to the present. In 1981, the MCOME analyzed one case of a potential UBC. As can be seen in Fig. 6, there was a proliferation in UBC cases in the year 2004 when 11 cases were processed through the MCOME.

When evaluated by decade, there has been a consistent increase in UBC cases. There were only six cases documented in the 1980s, although this might represent a limited awareness of the UBC issue at this time rather than actual prevalence. In terms of frequency, there were only a few cases (if any) per year throughout the 1980s. In the 1990s, the MCOME saw a steady rate of incoming UBC cases with annual frequencies ranging between one and three cases. After 2000, there were at least two cases per year, every year. This corresponds with the time that the fourth author began working steadily at the MCOME, which may have increased awareness of the UBC situation. Within the last decade, the frequency of UBC deaths investigated by the MCOME has ranged from two to 11 cases per year. While the MCOME's annual UBC caseload is variable (e.g., only two

## Arizona OpenGIS Initiative for Deceased Migrants

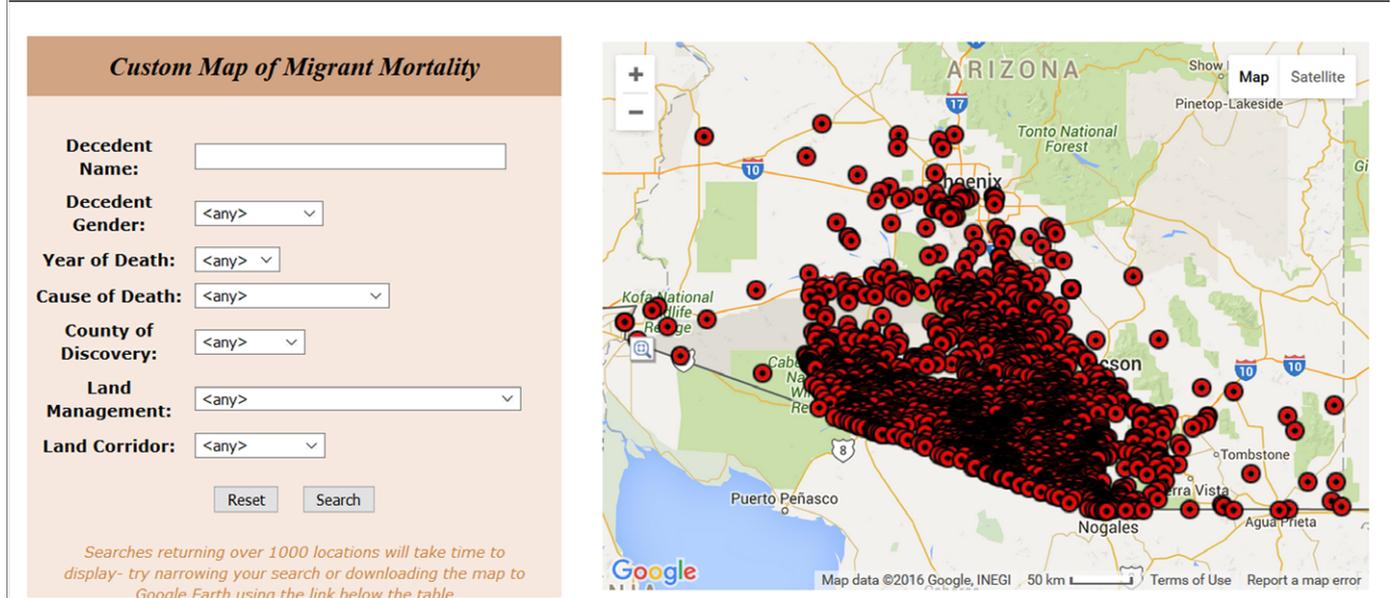


FIG. 4—Map of Migrant Mortality from Humane Borders, Inc. Each red dot indicates the location where an individual or remains were found within Arizona. As of April 13, 2016, the map depicted 2,598 cases spread across seven counties (<http://www.humaneborders.info/app/map.asp>). [Color figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

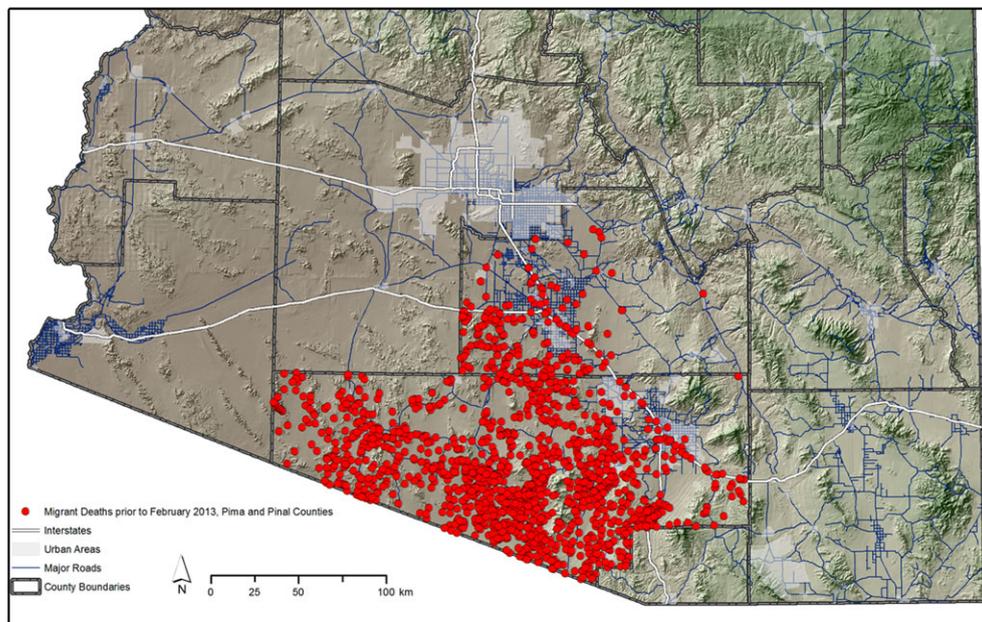


FIG. 5—Approximate replication of the Map of Migrant Mortality presented at the AAFS 2014 Symposium indicating deaths in Pima and Pinal counties. Map created by Dr. John Chamblee at Humane Borders, May 2016. [Color figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

cases in both 2010 and 2011), the average annual UBC caseload within the last 15 years is 5.9 cases.

Of the 107 total cases evaluated for the study, three individuals were anthropologically determined to be female and three were probable females. Of the remaining individuals, 97 were

anthropologically determined to be males and four individuals were of an indeterminate sex. Age at death for UBCs was estimated to be between 15 and 60 years. The majority of UBCs had an age estimate that fell between the ages of 20 and 50 years with the highest representation in the Young Adult age

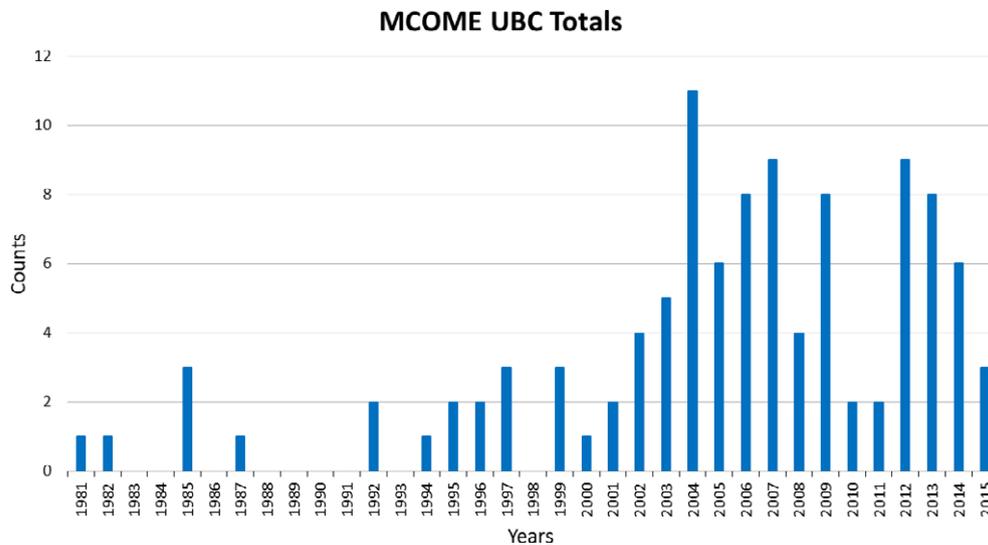


FIG. 6—Total UBC cases for the MCOME from 1981 to 2015. [Color figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

category (20–34.5 years) as designated in *Standards* (17) (Table 1).

The vast majority of UBC cases had an “undetermined” cause of death (COD) noted on the medical examiner report ( $n = 87$ ) (Fig. 7). However, a number of cases did indicate a non-natural COD, including exposure ( $n = 3$ ), homicidal violence ( $n = 2$ ), gunshot wound(s) ( $n = 7$ ), blunt force trauma ( $n = 4$ ), acute drug/alcohol intoxication ( $n = 3$ ), and drowning ( $n = 1$ ). In all cases where the COD was determined, the sex of the individual was male. These cases varied taphonomically from fresh to decomposed or skeletonized/mummified. Not all skeletal remains were complete, and in some cases, an individual was represented by a single skeletal element (e.g., a mandible or a right parietal).

## Discussion

For the purposes of this study, the authors followed the PCOME’s criteria as an example for categorizing potential UBC deaths in Maricopa County. As mentioned above, in order for an individual to be included in this sample, he/she had to be found in a desert area, his/her biological profile had to indicate potential Hispanic ancestral origin, and/or cultural artifacts had to indicate potential foreign origin. The strict criteria of inclusion were applied to concentrate on individuals who were actively crossing the desert.

Narrowing the focus of the study inevitably led the authors to exclude many cases where foreign nationals were found deceased within the city limits. While these individuals do not meet the criteria of inclusion according to PCOME’s or this study’s designation, it is possible that they were UBCs who died

later within the city limits. These individuals are still subject to the same intensive process of identification as other foreign nationals actively crossing the desert.

Since the completion of this study, and our presentation at the 2015 AAFS meeting (18), the authors are happy to announce that further improvements have been implemented at the MCOME to increase UBC accounting and identification rates. DNA processing checks are conducted to ensure that DNA profiles are completed in a timely manner and promptly entered into the CODIS system. As a result, four presumptive UBC identifications have been confirmed with DNA, and an additional identification is awaiting DNA confirmation. Additionally, fingerprint comparisons have resulted in the identification of three UBCs. MCOME’s Unidentified Decedent Coordinator (the third author) resubmits fingerprint cards every 1–2 years to the numerous fingerprint databases (i.e., Integrated Automated Fingerprint Identification System (IAFIS), Arizona Automated Fingerprint Identification System (AZAFIS), Homeland Security, and U.S. Border Patrol’s Automated Biometric Identification System (IDENT)) searching for a match as technology improves and is able to scan poor-quality fingerprints.

In keeping with the PCOME’s model for processing and identifying UBCs, all unidentified decedents are examined by a forensic anthropologist and forensic odontologist to provide a more detailed biological profile. Additionally, the MCOME now regularly communicates and shares all UBC case profile data with the PCOME, the Colibrí Center for Human Rights, Humane Borders, Inc., U.S. Border Patrol, local law enforcement agencies, foreign consular offices, and other community organizations. The Map of Migrant Mortality is regularly updated, and

TABLE 1—Age-at-death and sex estimations for MCOME’s 107 UBC cases.

Age Category	Sex	Total Counts
Adolescent (12–19.5 years)	Six males	6
“Adult”	Eleven males, one female, one indeterminate	13
Young Adult (20–34.5 years)	Forty seven males, two females	49
Middle Adult (35–49.5 years)	Twenty five males, two females	27
Old Adult (50+ years)	Three males	3
Unknown Age	Five males, one female, three indeterminate	9
<b>Totals</b>	<b>Ninety seven males, six females, four indeterminate</b>	<b>107</b>

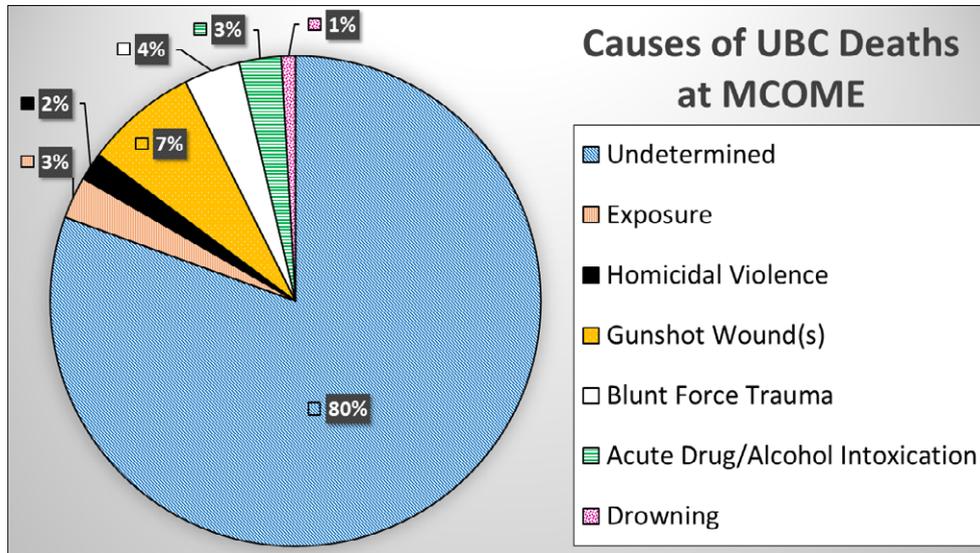


FIG. 7—Causes of death (COD) for MCOME UBC cases, as reported in the medical examiner reports (n = 107). [Color figure can be viewed at wileyonlinelibrary.com]

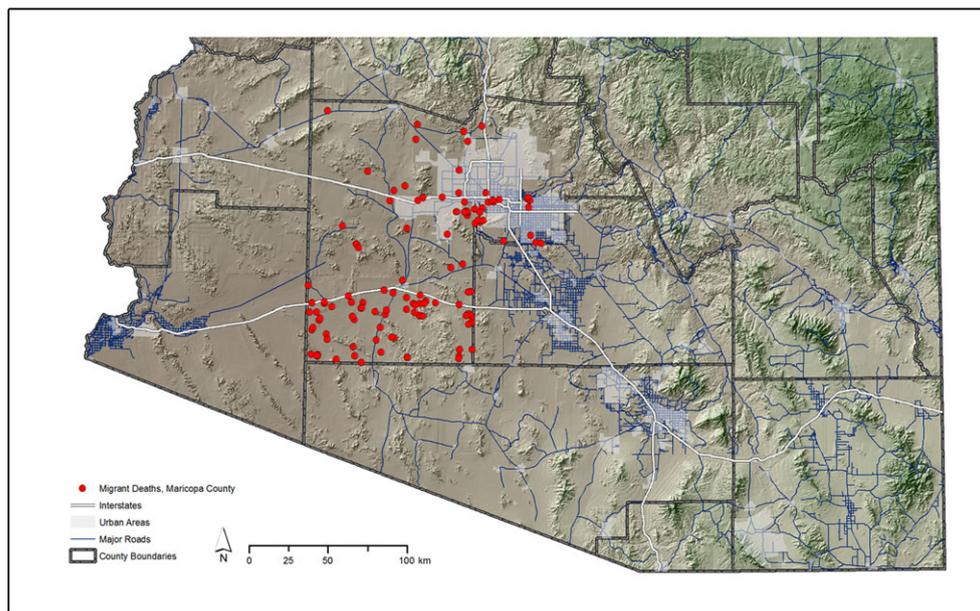


FIG. 8—Map indicating migrant deaths within Maricopa County, many reported by MCOME. Map created by Dr. John Chamblee at Humane Borders, May 2016. [Color figure can be viewed at wileyonlinelibrary.com]

Ms. Eggers provides a spreadsheet of data pertinent for mapping UBCs on a quarterly basis (Fig. 8). Since the period of data collection for this study, all individuals have subsequently been added to the Map of Migrant Mortality allowing for a more holistic visualization of UBC deaths across Arizona (Fig. 9). All unidentified decedent information is also entered into the NamUs system to assist with the identification of these individuals in the future. Finally, because the MCOME’s current computer system does not have a specific function to record and track UBC cases—Ms. Eggers does this separately—this research has prompted discussions to update the MCOME’s software program to better document and manage UBC cases.

In addition to the work that is done within the MCOME, new efforts are underway to bring more awareness to the issue of missing persons and border crossing fatalities throughout

Arizona. As there are nearly 2,000 missing persons and 1,300 unidentified decedents in Arizona, the first annual Missing in Arizona Day was held in October 2015 and was a collaboration between the MCOME, the Maricopa County Sheriff’s Department, the Phoenix Police Department, and Arizona State University (Fig. 10). Inspired by other states’ similar events, the Missing in Arizona Day was initiated by Ms. Eggers and Detective Stuart Somershoe of the Phoenix Police Department’s Missing and Unidentified Persons Unit. This event encouraged families and friends of missing persons to attend and provide any available information about the missing individual(s). Law enforcement representatives from across the state were present to take DNA reference samples, dental records, fingerprints, photographs, and other identifying information from families of missing persons.

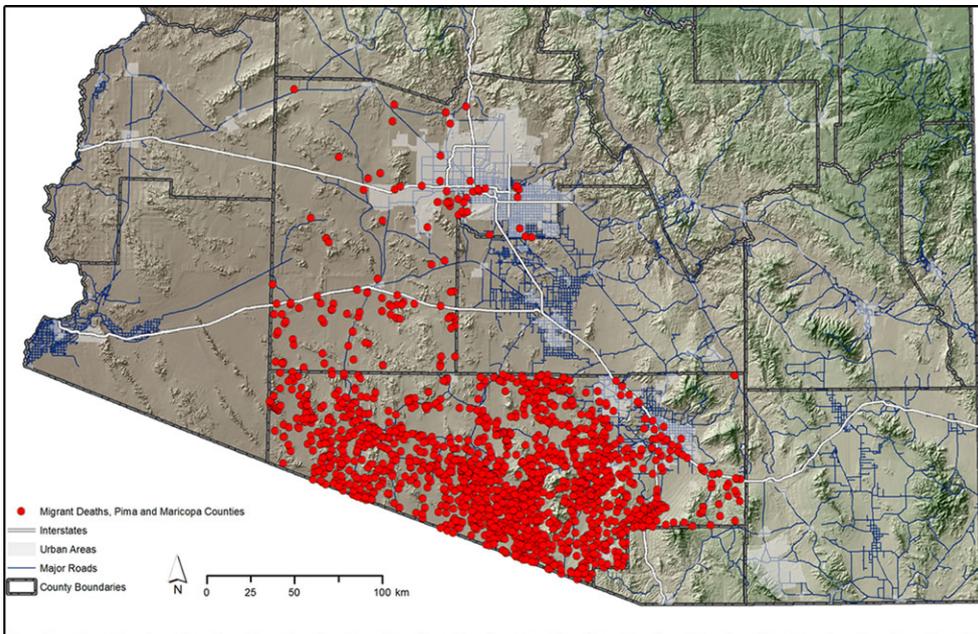


FIG. 9—Map of Migrant Mortality documenting deaths within Pima and Maricopa counties and providing a more comprehensive visualization of deaths farther north in Arizona. Map created by Dr. John Chamblee at Humane Borders, May 2016. [Color figure can be viewed at wileyonlinelibrary.com]

**missing in arizona**

**Saturday, October 24** ASU West College Campus  
10:00 AM – 4:00 PM 4701 West Thunderbird Road, Glendale, AZ

**connecting people with the resources to find their long-term missing loved ones**

**Who Should Attend?**  
Families and friends affected by the disappearance of a loved one. The event is free, family-friendly and open to the public. Law Enforcement will be on hand to take reports and gather information and identifiers (DNA, medical records, fingerprints, photographs, etc.) from families of missing persons. Families are encouraged to bring medical and dental records of their missing loved ones. A support group will be held from noon to 2:00 PM for family members with a missing loved one. Participation in the support group requires registration ahead of time. There will be a candle-lighting ceremony to honor the missing at 3:00 PM

**For Reservations and Information**  
Detective Stuart Somershoe, Phoenix Police Department  
(602) 261-8065 or stuart.somershoe@phoenix.gov

**missing in arizona**

**Sábado, 24 de Octubre** ASU West College Campus  
10:00 AM – 4:00 PM 4701 West Thunderbird Road, Glendale, AZ

**conectando personas con los recursos para encontrar a sus seres queridos desaparecidos**

**¿Quién debe asistir?**  
Familias y amigos afectados por la desaparición de un ser querido. El evento es gratuito, para familias y abierto al público. La Policía estará a su disposición para tomar informes y obtener información y los identificadores (ADN, registros médicos, huellas dactilares, fotografías, etc.) de las familias de las personas desaparecidas. Las familias deben de llevar los registros médicos y dentales de sus seres queridos desaparecidos. Un grupo de apoyo se llevará a cabo desde el mediodía hasta las 2:00 PM para los miembros de la familia con un ser querido desaparecido. Habrá una ceremonia de iluminación de la vela para honrar a los desaparecidos a las 3:00 PM.

**Para reservaciones e información**  
Detective Jared D'addabbo, Departamento de Policía de Phoenix, (602) 534-3053

FIG. 10—Flyers, in English and Spanish, advertising the first annual Missing in Arizona Day. [Color figure can be viewed at wileyonlinelibrary.com]

Approximately 100 people attended the Missing in Arizona Day event. Data for 32 cases were recorded, 22 of which were new missing person cases never before reported to the police. Of the 22 new cases, 11 are thought to be missing persons crossing

the border. Families of missing persons living in Mexico traveled to the event, and 41 family DNA reference samples were collected. These DNA samples were submitted to the University of North Texas and will be entered into CODIS after processing.

Not only did this research mobilize changes within the MCOME, it also fostered increased intrastate collaboration to more effectively locate and identify missing persons and UBCs in Arizona. For example, at the Missing in Arizona Day, officers from U.S. Border Patrol and Ms. Eggers established a new collaboration where they now regularly exchange case information such as fingerprint cards, decedent phone numbers, passport information, and other useful data. This research accomplished its goals, ultimately contributing both biological and geographic data to the ongoing work being conducted in Pima County to increase the overall understanding of the spatial distribution of UBC deaths in Arizona.

Based on the challenges this research sought to overcome, and the goal of making UBC identification a more prominent aspect of medicolegal casework, the authors felt it would be helpful to provide suggestions for offices or jurisdictions interested in modifying their UBC protocols, or who are beginning to develop standards for UBC identification. First, having a method for tracking UBCs is imperative; this study developed a database, although we suggest a more advanced database that is linked to the medical examiner/coroner's office case file system and NamUs, if possible. Ms. Eggers notes that U.S. Border Patrol is also developing a missing migrant database for easy comparison with medical examiner's cases. Second, we recommend establishing defined UBC criteria based on your jurisdiction, making sure to evaluate property and other cultural artifacts. Third, because sharing information is vital when attempting to identify UBCs, we strongly encourage frequent communication between medical examiner/coroner's offices and foreign consulates, U.S. Border Patrol, and other offices in your jurisdiction. At MCOME, various consulate generals' offices were contacted individually to establish rapport. Finally, formalized DNA and fingerprint processing check protocols for unidentified/UBC cases are recommended. We encourage the creation of an Unidentified Decedent Coordinator position, if possible, who regularly evaluates the status of DNA and fingerprints and submits these items for re-assessment, as discussed above, to prevent cases from going cold. Every jurisdiction faces its own challenges when it comes to UBC identification, but perhaps these suggestions can be enacted to enhance UBC tracking and identification.

## Conclusions

In documenting UBC deaths in Maricopa County, the MCOME has extended the visualization of the more northerly reaches of migration routes across the state of Arizona. Additionally, this research has improved the accounting of UBCs and made information more accessible to family members and authorities, thereby further contributing to the overall awareness of the border crossing issue. The authors anticipate that this research will continue to improve the documentation and processing of UBCs at the MCOME and will act as a catalyst for continued cooperation between Arizona's Medical Examiner Offices, local law enforcement, U.S. Border Patrol, community organizations, and foreign governments. As a result, this increased awareness and cooperation will aid in the personal identification of UBCs allowing for the return of many unknown decedents to their loved ones in foreign countries. By employing the Pima County model, the authors hope to demonstrate the importance of intrastate anthropological and pathological collaboration in identification efforts and encourage this collaboration whenever possible.

## Acknowledgments

This research would not have been possible without the following collaborators: Dr. Robin Reineke, Chelsea Halstead, Dr. Bruce Anderson, and Dr. John Chamblee. Many thanks to the staff at the Maricopa County Office of the Medical Examiner and the Pima County Office of the Medical Examiner for their assistance with this project.

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