

## Determining Ancestry

Although forensic anthropologists must determine ancestry—also referred to as **race**—as accurately as possible, this is difficult to do. Populations vary widely, with much overlap among various groups. Still, some extent of past reproductive isolation in groups has resulted in features that are found with much greater frequency in some skeletons than in others.

Terminology to describe these categories of people from various geographical regions varies. The three most widely used general categories in the United States are African, Asian, and European ancestry. The European category includes East Indians, and Asian and Native American skulls have many similarities because of their shared ancestry. Australian aboriginal peoples possess a number of distinctive skull features, but such skulls are rarely found in the U. S. Some studies have focused on mainly quantitative, or **osteometric**, traits (e.g., Ayres et al., 1990), while others deal with qualitative, or **anthroposcopic**, traits (e.g., Hrdlička, 1920; Hinkes, 1990; Rhine, 1990). Both types of traits used together provide the greatest accuracy.

### Quantitative (Osteometric) Features

Two examples of qualitative traits are cranial shape and nasal shape, which you learned earlier in this lab.

### Cranial Index (Ubelaker, 1999; Byers, 2005)

up to 74.9 = narrow or long-headed (dolicocephalic)	more often African Origin
75.0–79.9 = average (mesocephalic)	more often European Origin
80.0–84.9 = round-headed (brachycephalic)	more often Asian Origin
over 85.0 = very round-headed (hyperbrachycephalic)	

### Nasal Index (Bass, 1995; Ubelaker, 1999; Byers, 2005)

53 and up = wide-nosed (platyrhiny)	more often African Origin
48–52.9 = medium-nosed (mesorhiny)	more often Asian Origin
up to 47.9 = narrow-nosed (leptorhiny)	more often European Origin

### Qualitative Features (Anthroposcopic Traits)

Table 8.3 lists just a small sample of the many traits that are considered when attempting to determine ancestry. Most of these can be observed in Photos 8.6–8.8, as indicated.

TABLE 8.3: Selected Traits for Determining Ancestry

	African Origin	European Origin	Asian Origin
<b>Nasal root (superior nasal margin)</b>	low, gently rounded	high, narrow, peaked	low, peaked
<b>Lower border of nasal aperture</b>	“guttered”	sharp sill, forms ridge	flatter, often indistinct
<b>Orbital shape</b>	squared	tear-drop, sloping	rounded
<b>Malar tubercle</b>	absent	usually absent	usually pronounced, “droopy”
<b>Dental arcade shape</b>	broad anteriorly; rectangular	narrow anteriorly; parabolic	broad posteriorly, rounded
<b>Lingual side of incisors</b>	flat	flat	shovel-shaped