2-players/2-teams 10-minutes Age 8+

HISTORIES



Wiki Histories are quick little games—fun for adults—engaging for students. Each game is a snapshot of human history, following the same basic rules but adding a unique twist for variety. Download all the up-to-date Wiki Histories on MathPickle.com.

Wiki Histories are not at the fun level of the best games you will find on boardgamegeek.com but that would be missing the point. The real strength of these games is that they are great for teaching problem-solving, history, and board game design.

Teaching Problem-Solving

The #1 purpose of the elementary school math classroom is not to learn arithmetic but to get students to problem-solve. Start by splitting your class into two teams and projecting a *Wiki History* that only has a single map. Get the whole class to play. That's why the territories have letters. Students can be called upon one at a time to claim a territory or attack a territory by just saying its letter.

An unexpected benefit of these games is that most of the maps come with extra information that students should disregard. Students need to filter information—distinguishing vital stuff from the background fluff.

Teaching History

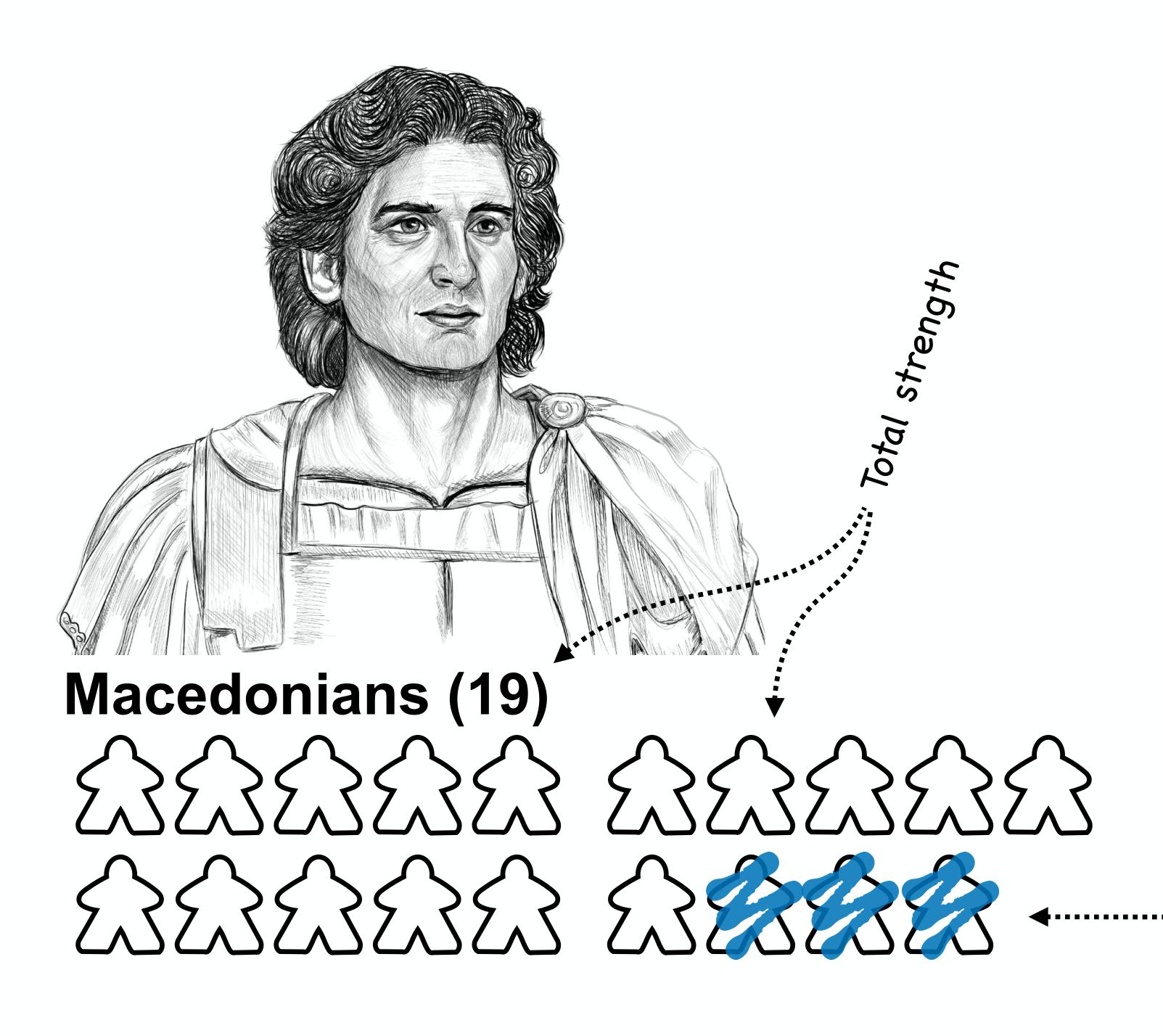
Playing games is one way to discover history. The simple mechanics of *Wiki Histories* do not seriously attempt to simulate history... however, the accompanying maps and mini-essays highlight little bits of history in a way that sticks with students. The mini-essays are written for high-schoolers, but the content can be simplified for younger students.

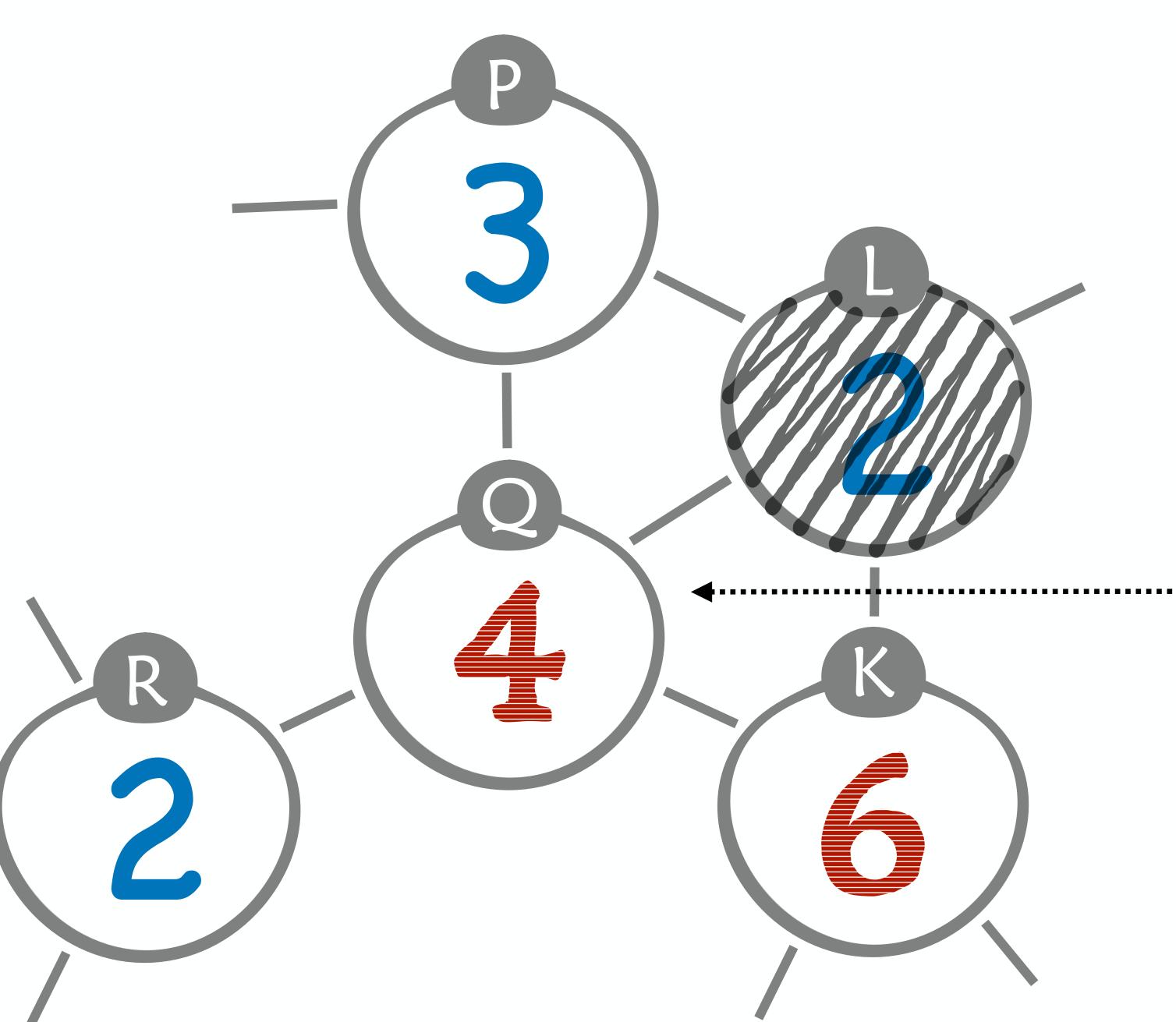
Teaching Board Game Design

Many North American schools teach board game design, but students are usually given too few constraints, resulting in games that are too big and take too long to play. Many never get played.

A practical solution is to get students create *Wiki Histories*. These games play in just 10 minutes, allow for lots of creativity, and are inexpensive—perfect for budget-conscious classrooms. They also offer a realistic path to publication: after the initial *Wiki Histories* are released, new ones will feature student-submitted designs. That will be inspiring for your students!

Look on MathPickle.com for a lesson plan.





Rules

1) Setup

- One player chooses a *Wiki History* and reads aloud the unique rules and the total strength of the two competing groups. The other player then selects one of the groups.
- Optionally, players can read the historical vignette.
- Players need a blue and red pen/pencil.
- If there are two maps—the *first player* is the one with a #1 written in the bottom-right corner of their map.
- If there is a single map—the *first player* is the one who selected the group higher up on the map.
- The *first player's* color is blue—their opponent's is red.

2) Claiming Territories

• The active player grabs their color and scribbles out a number of meeples. They write the same number on an unoccupied territory. That's its strength.

Example: The blue player scribbles out 3 meeples.

They use that 3 strength to claim a territory by writing a blue "3" in it.

- If there are two maps—the opponent must put this same information on their map using the same color. The active player then announces their remaining strength.
- Play alternates back and forth.
- On their turn a player *must* claim a territory if they have some remaining strength and there are some unoccupied territories. Otherwise, they *must* pass. The first player to pass is the *first attacker*.
- If a player passes, their opponent may continue to claim territories as often as they like.
- When both players pass, proceed to the attacking phase.

3) Attacking

- The active player chooses one of their opponent's territories to attack.
- They add up the strengths of all their undefeated connected territories.
- They say this combined strength out loud. If it exceeds the opponent's strength in the attacked territory, it is defeated and scribbled out.

Example: The red player has strength 4 in territory Q.

The blue player attacks territory Q with a strength of 3+2=5.

That is more than 4 so territory Q is defeated and scribbled out.

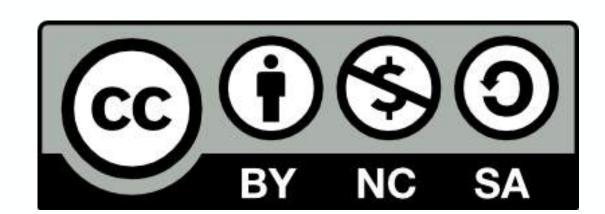
- If there are two maps—the defeated territory must be scribbled out on both maps.
- Defeated territories cannot attack or score.
- Alternate attacking until both players pass.
- If a player passes, their opponent may continue to attack as often as they like.
- When both players pass, proceed to the scoring phase.

4) Scoring

- The player with the most undefeated territories wins.
- In the case of a tie, the *first attacker* wins.

Sharing & Copyright

Wiki Histories are meant to be shared among teachers and parents. It will be my joy if students benefit from them. That's why Wiki Histories is not copyrighted. It is okay for you to share, print and laminate these maps.



Share comments and photos and rate *Wiki Histories* on the biggest board game website: boardgamegeek.com.

Support

The Kickstarter funding of C\$3600 paid for all of **Okan Bülbül's** sketches. In this time of AI, I love supporting human-created art. ;-) A special thanks to **Derek Tellier**, **Aaron Holmes**, **KeeferKicks** and **PippiMD** for contributing so much during the campaign.

A big thank you to MathPickle's long-term supporters! The best way to help me keep developing free classroom resources is by joining my community at <u>patreon.com</u>.

Steven Heller
Paula Hamilton
Zenon Berg
Derek Tellier
Amanda Serenevy
Math Makes Sense
Jerry Dean Weimer
Reed Oei
Charlie Neibel

Gabriella Pinter
Gavan Brown
Kendra Lockman
Aaron Holmes
Adam Carpenter
David Wees
Molly Crocker
Simon Cheng
Antony Chen

Creative People



Gordon Hamilton (aka Dr. Pickle) is the inventor, mini-essay writer and map maker for *Wiki Histories*. He is is best known as the inventor of *Santorini* and as the director of mathpickle.com. He lives in Calgary, Canada.

Okan Bülbül is an engineer and artist. He did all of the sketches for Wiki Histories. Okan lives in Ankara, Turkey. You can check out his art here.



Mark Burstein was the editor of the mini-essays. Mark's work was supported by **Nancy Blachman**, Founder of the Julia Robinson Mathematics Festival. Both live in California, USA.

Thank you to the playtesters who have their fingerprints all over the game: Paul Saxberg, Derek Tellier, Aaron Holmes, Julia Hamilton and Sanja Brajic.

Wiki Histories was inspired by Eric Solomon's 1973 game, Aggression. Eric, in turn, was inspired by Albert Lamorisse's 1957 game, Risk. We are living through the renaissance of board games. Thank you to those who went before!

Goodbye Big Dinosaurs 66 million years ago

66 million years ago, nearly all dinosaurs were wiped out. In the 1960s, it wasn't clear how fast this mass extinction had been or what had triggered it. Scientists had competing hypotheses:

- 1) climate change
- 2) volcanic activity
- 3) competition from mammals
- 4) massive epidemic
- 5) asteroid impact
- 6) supernova explosion

Meanwhile, in the 1980s, scientists uncovered another curious puzzle: a thin layer of iridium-rich sediment found worldwide. Beneath this layer, in older rock, dinosaurs still ruled the Earth; above it, they were gone.

Iridium is an element rare on Earth but common in asteroids, and this layer of sediment had 30 times the concentration of iridium compared to Earth's crust. It pointed to an asteroid impact as the cause. But if an asteroid had struck, where was the crater?

While the iridium-rich layer was typically as thin as a coin worldwide, a dig site in Haiti revealed an iridium layer ten times thicker. Clues from the sediment thickness, especially around the Gulf of Mexico, eventually led to an enormous crater buried beneath the Yucatán Peninsula. It's known as the Chicxulub crater.

The crater was made by a Mount Everest–sized asteroid crashing into the Yucatán at a speed of 65,000 km/hr (40,000 mph). The impact sent dust and debris into the atmosphere, blocking sunlight, chilling the planet, and collapsing the food chain—triggering the mass extinction that wiped out most of Earth's species, including the dinosaurs.

Yet life persisted. Small, feathered dinosaurs and early mammals survived the impact and as the Earth stabilized, they competed for the newly opened niches.

The last triceratops poses for one last sketch

Goodbye Big Dinosaurs 66 million years ago

(simplified essay)

A long, long time ago, about 66 million years before you were born, a giant rock from space, smashed into our planet! It hit a place we now call the Yucatán Peninsula, which is in Mexico.

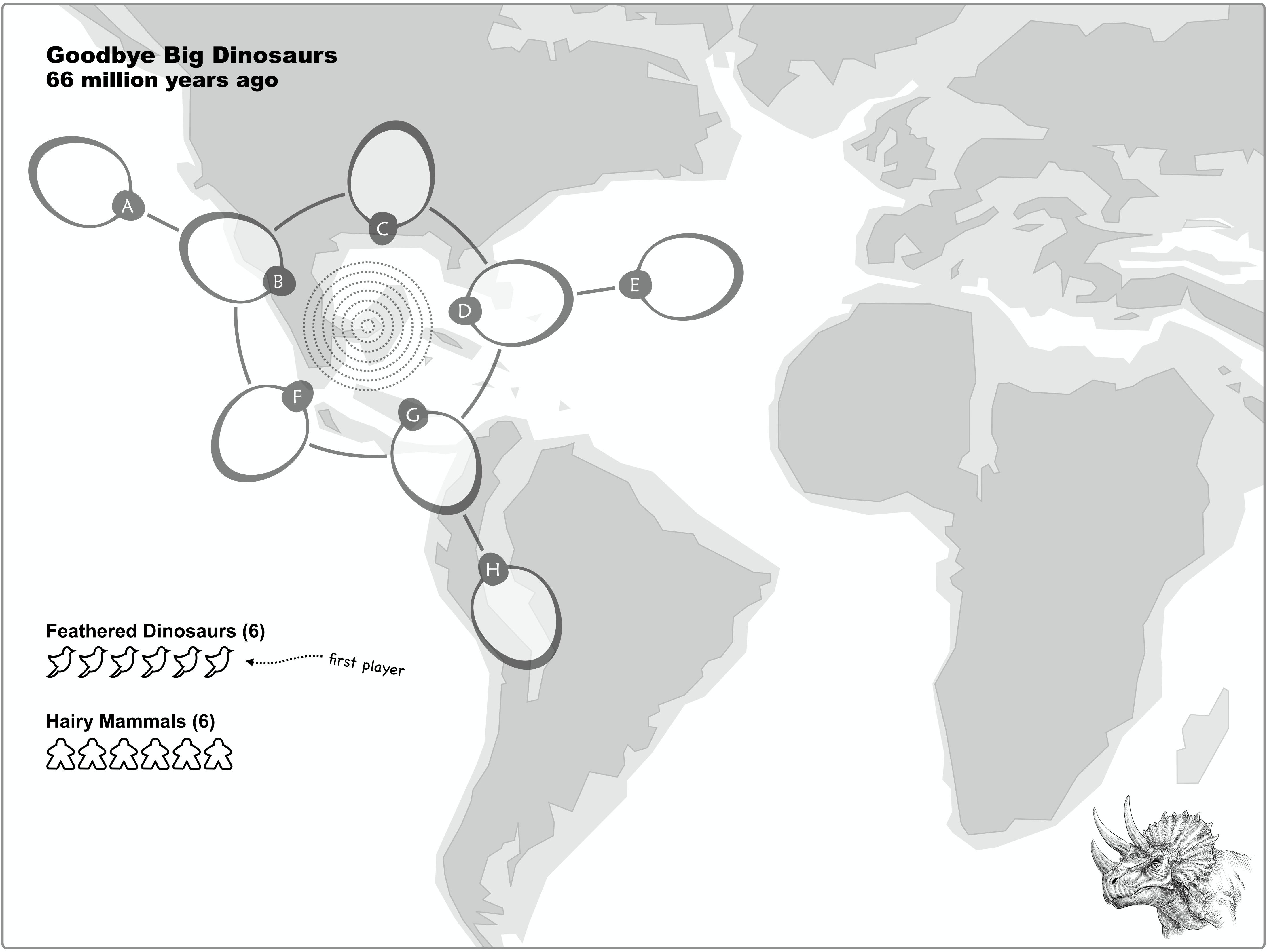
The rock was really big—about the size of a mountain! When it smashed into Earth, dust and rocks were thrown high into the sky, blocking sunlight, which made the Earth very cold. Many plants couldn't grow, and without enough food, all of the big dinosaurs died.

But something amazing happened. The small feathered dinosaurs and hairy mammals began to thrive. They had more space, food, and chances to grow.

Over time, these became the animals we know today, like dogs, cats, humans and the feathered dinosaurs we call birds.

The last triceratops poses for one last sketch





Welcome to the Stone Age! 2 million years ago

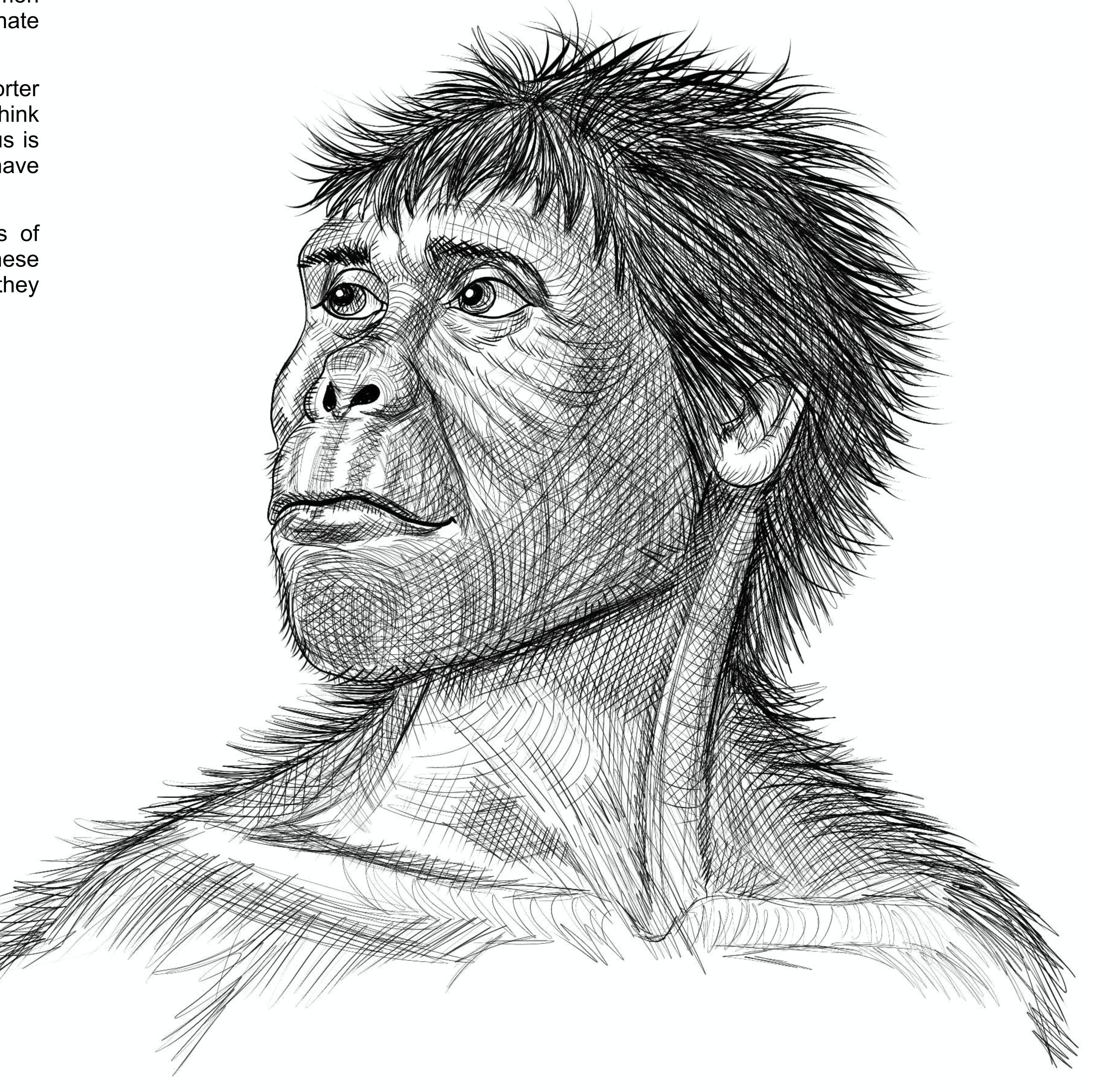
Six million years ago, our 300,000th-great-grandparents lived on an Earth with coastlines similar to those of today. They resembled and behaved much like present-day chimpanzees. Like all species, they were evolving—some of their descendants became modern-day bonobos, common chimpanzees, and humans. Others were not as fortunate and went extinct.

By four million years ago, our ancestors had evolved shorter fingers, a more upright gait, and a more diverse diet. Think of these as bipedal chimpanzee-scavengers. Their genus is *Australopithecus*. By two million years ago, they may have been using stones to make tools.

New competition emerged. *Homo habilis*, descendants of *Australopithecus* and our direct ancestors, appeared. These newcomers were shorter, smaller, and smarter—and they were definitely using stones to make tools.

Welcome to the Stone Age!

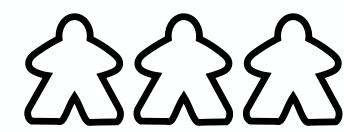
Homo habilis—small & smart

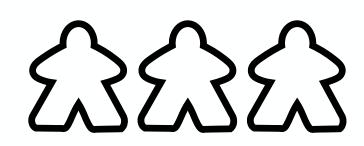


Welcome to the Stone Age! 2 million years ago

Australopithecus (12) →.....

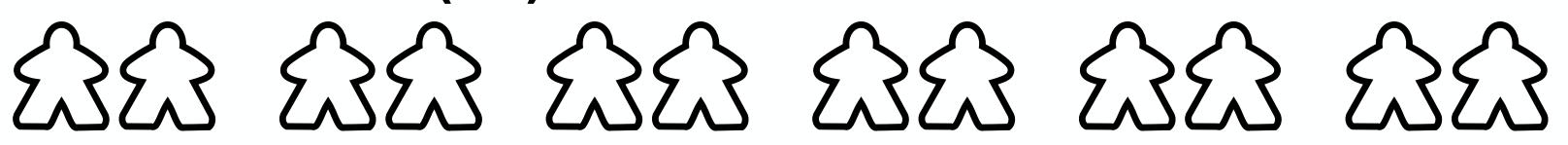
first player



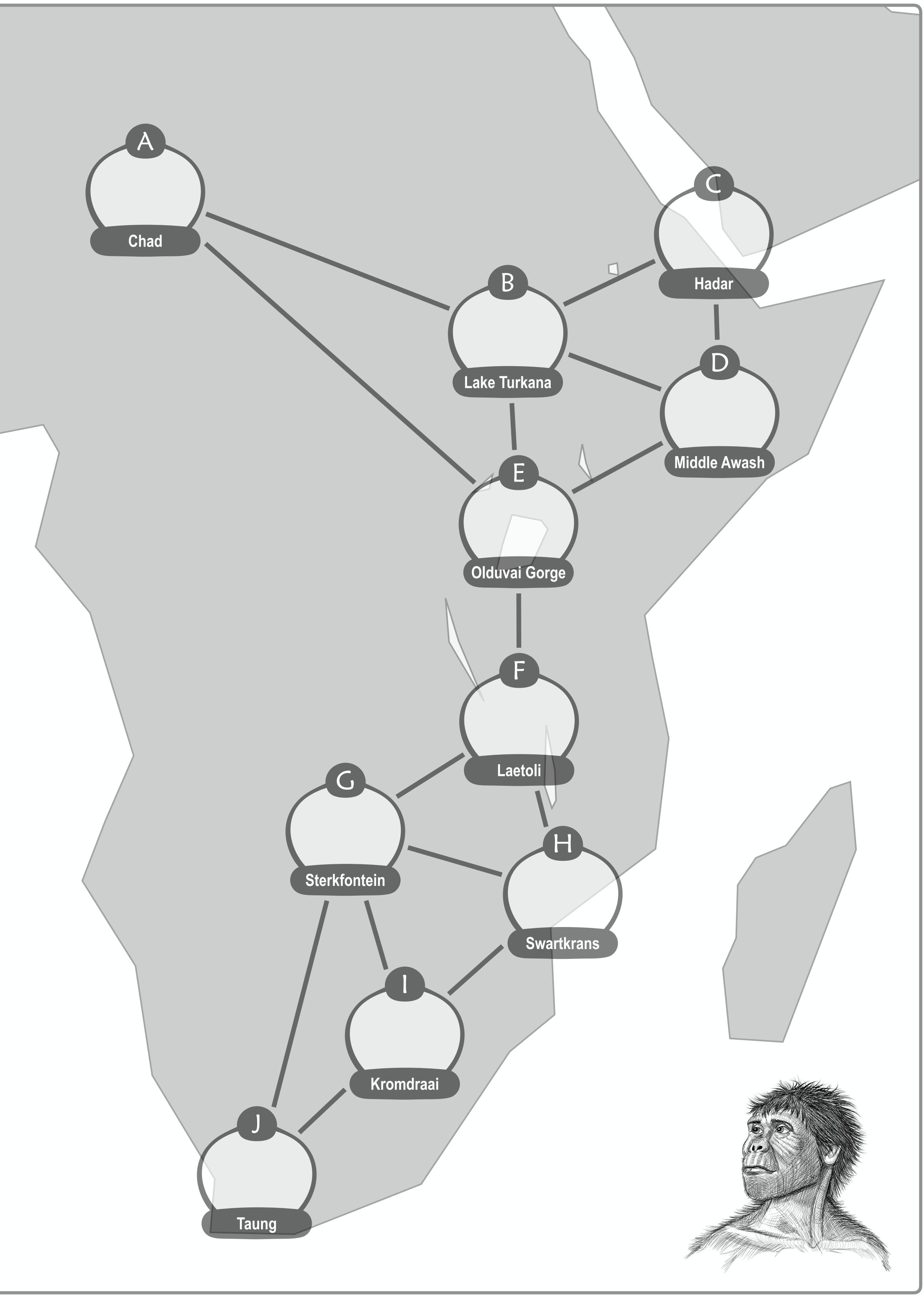


• Use exactly 3 strength when claiming a territory.

Homo habilis (12)



Use exactly 2 strength when claiming a territory.



Homo Erectus Captures Fire 1 million years ago

With a larger brain, *Homo erectus* made a big leap forward: they captured fire. Fire helped Homo Erectus a lot...

Cooking

Charred bones and plant remains in Wonderwerk Cave, South Africa suggest that *Homo erectus* was using fire for cooking about a million years ago. We can be pretty certain of this evidence. Naturally occurring wildfires leave burnt bones that look different than the bones left over after a controlled cooked meal. Why was cooking important? Don't eat a raw potato or chicken to find out. Cooking makes food more nutritious and easier to digest.

Warmth

Fire made it possible for *Homo erectus* to live in colder places. About 770,000 years ago near Beijing, China, they were living in limestone caves and using fire for warmth. The evidence is not only that Beijing gets cold in winter and that the remains of fires were discovered... but that some of the fire-sites lacked the detritus associated with cooking and seem to have been strategically located to provide heat for the cave.

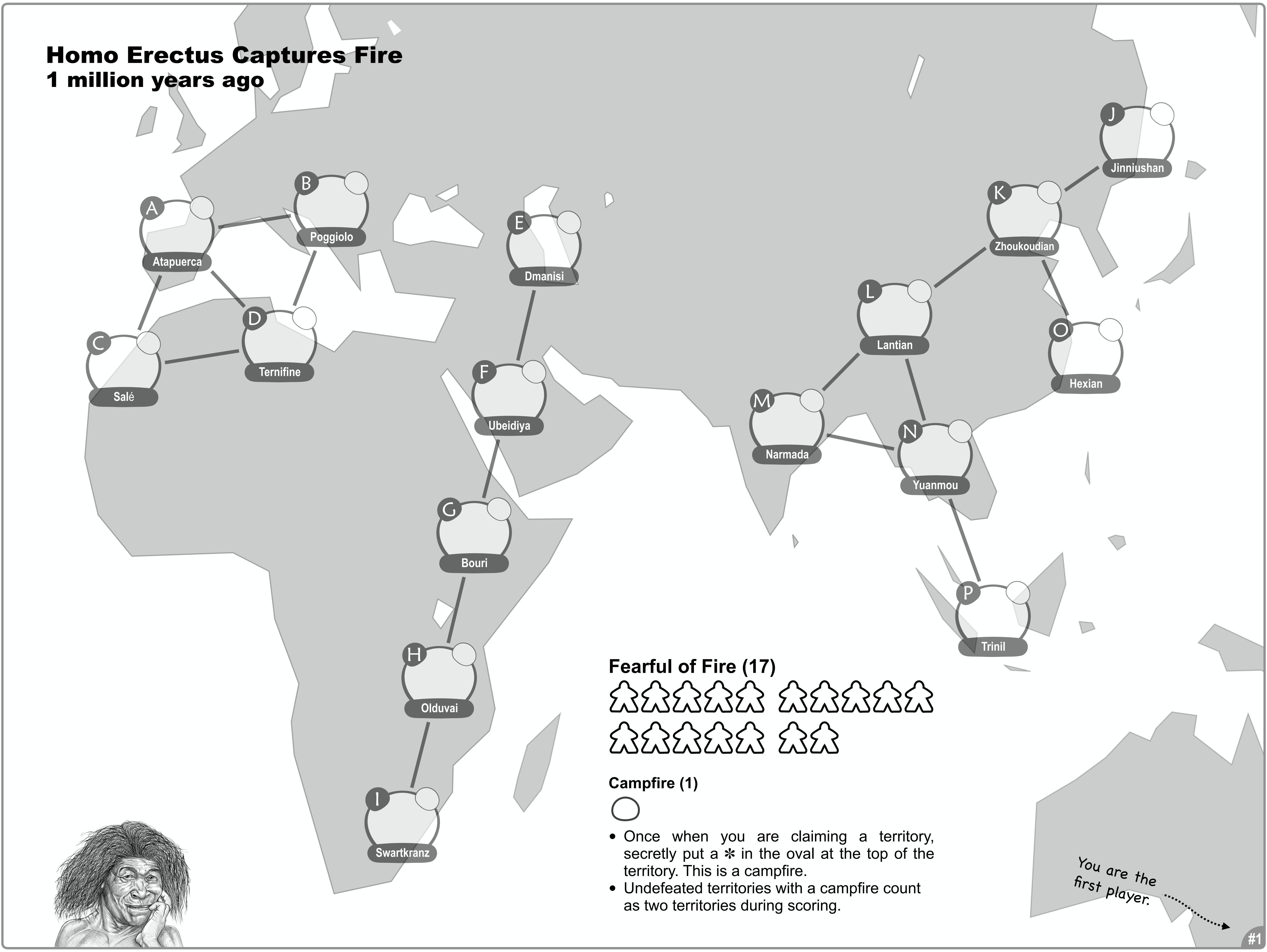
Protection

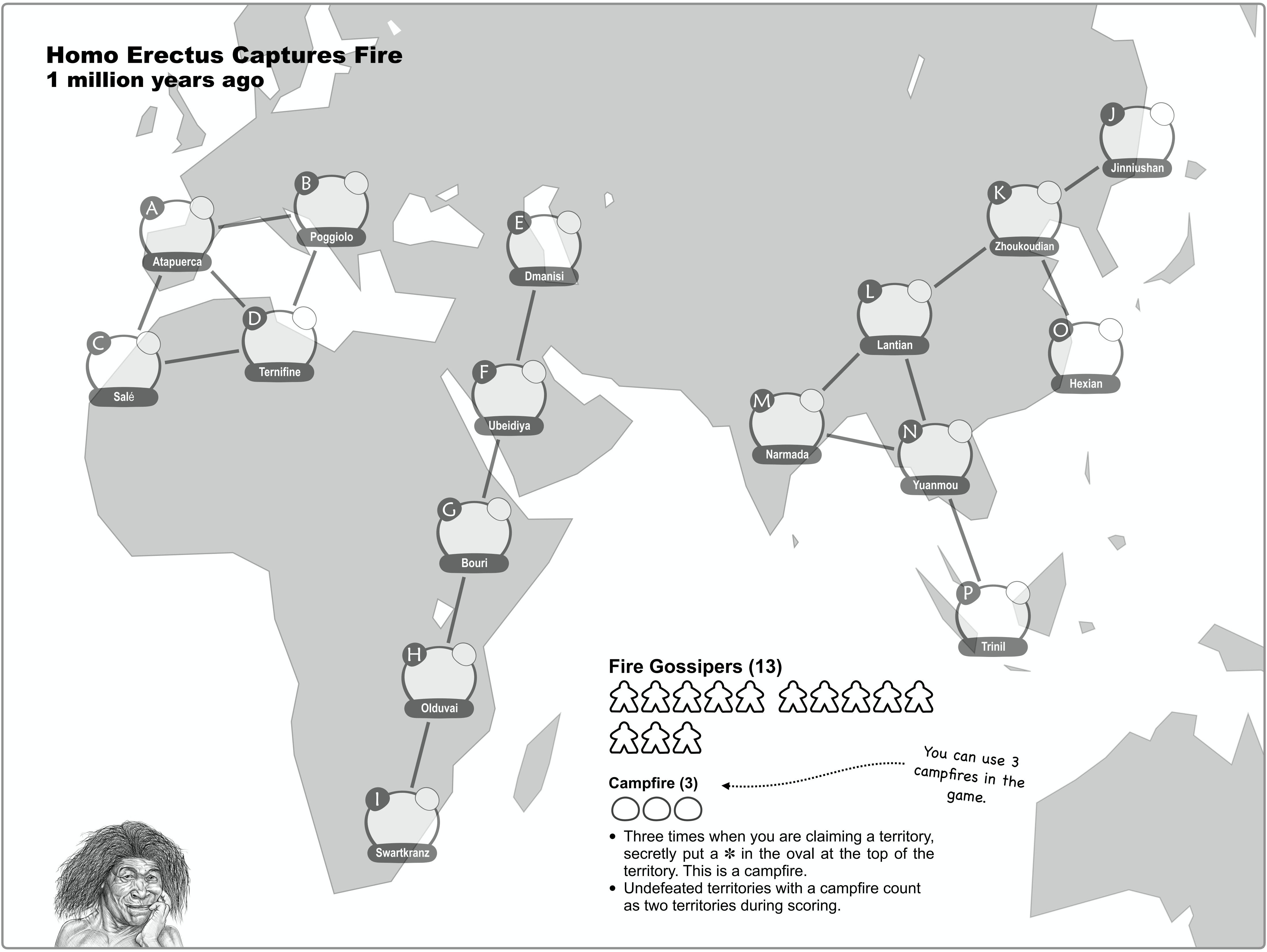
Fear of being eaten by predators would have kept many a *Homo erectus* child awake at night. These were the original monster-under-the-bed fears, but they were real. Burnt patches of earth near cave entrances or in specific defensive positions suggest that fire was used to keep predators away. Evidence for this defensive use of fire again also goes back a million years to Wonderwerk Cave, South Africa.

Language

Fire accelerated the evolution of human language because socializing could extend into the night. In the flickering light, conversations became more abstract. Individuals benefited from activities like seducing with flattery, spreading false rumors, gossiping about social transgressions, and organizing the community for hunting or warfare.

Homo erectus—loving those fires!





Australian Megafauna meet Modern Humans 50,000 years ago

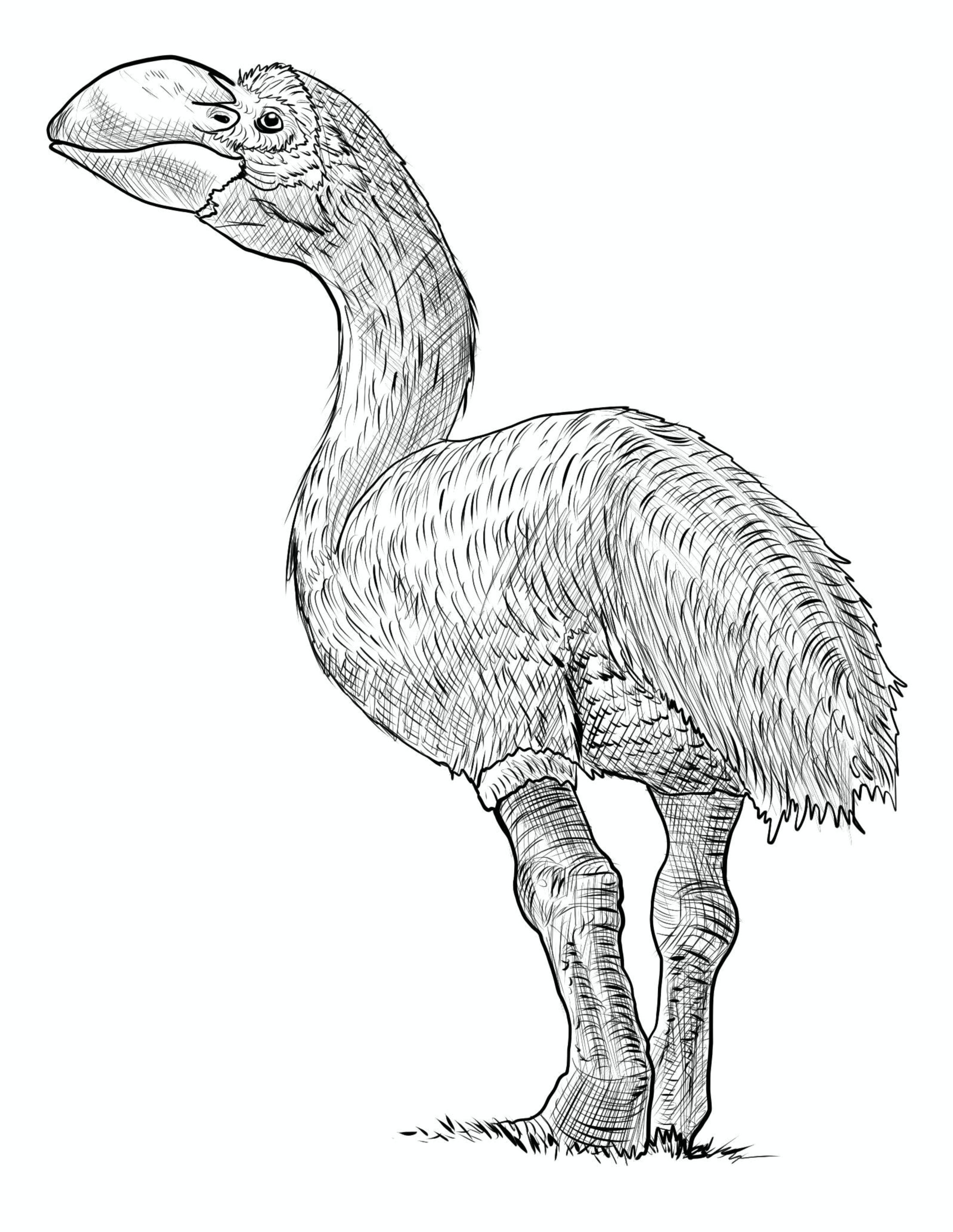
During the last ice age, sea levels were so low that New Guinea and Australia formed a single landmass. It was during this time that *Homo sapiens* arrived, their arrival suspiciously coinciding with the extinction of much of Australia's megafauna.

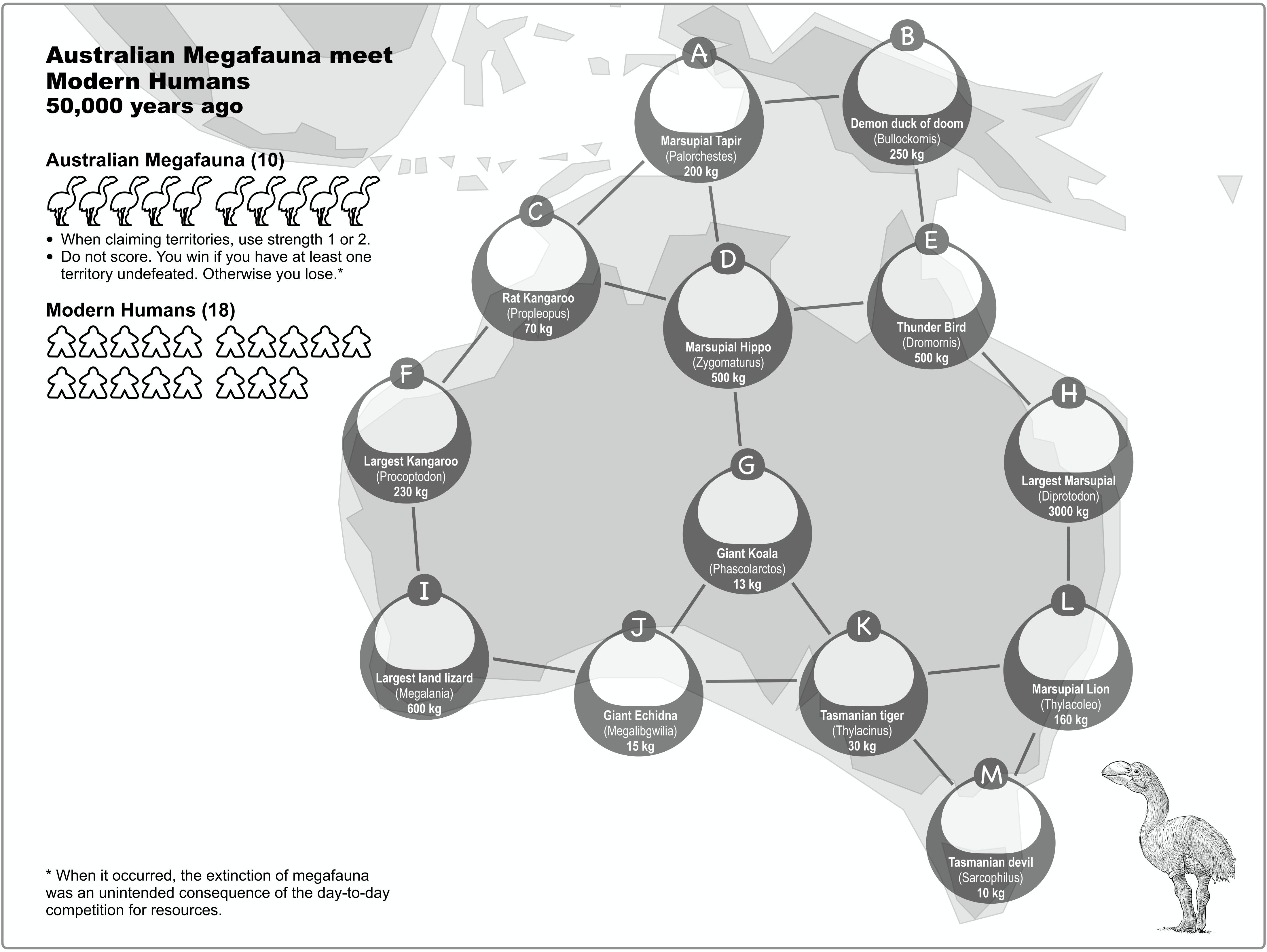
One of the top contenders for human-induced extinction is the 600-kg terrestrial lizard *Megalania*, possibly the largest venomous animal ever to exist. Although *Megalania* was fast over short distances, it was accustomed to being at the top of the food chain and was ill-equipped to handle human endurance, which allowed hunters to pursue it for hours. Humans arrived about fifty thousand years ago, and *Megalania* went extinct around the same time—likely not a coincidence.

The 500-kg marsupial hippo, *Zygomaturus*, went extinct after coexisting with humans for about seventeen thousand years, suggesting that their demise was likely due to a combination of climate change and human predation. The same fate befell the largest marsupial ever to exist, the 3,000-kg giant wombat, *Diprotodon*, which went extinct about six thousand years after humans arrived. The giant 500-kg bird *Dromornis* survived for about twenty thousand years after humans arrived before it, too, went extinct.

Humans can be irritating neighbors.

Dromornis australis—strutting around in happier times





Neanderthal's Last Stand? 42,000 years ago

Neanderthal fossils were first discovered in 1829 in Belgium, followed by a second discovery in 1848 in Gibraltar. Since these finds occurred before the publication of Darwin's On the Origin of Species, the fossils were initially interpreted as human—perhaps humans with a strange illness, but human nonetheless. The third discovery occurred in Neander, Germany, in 1864, where the fossils were identified as a new species: *Homo neanderthalensis*. For the next hundred years, Neanderthals were often condescendingly referred to as cavemen, but the reality was more complex.

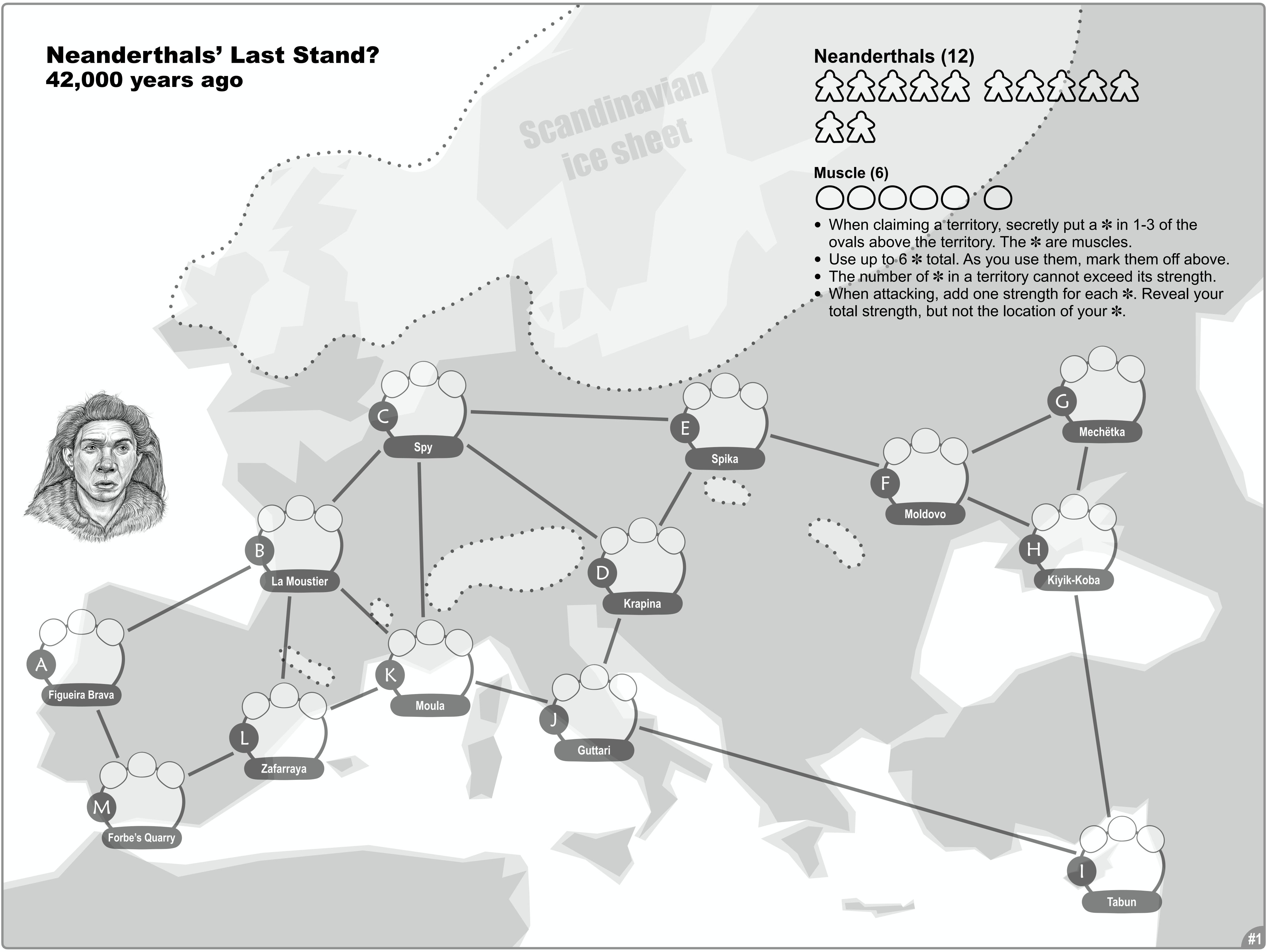
Supporting the cavemen stereotype, Neanderthals did not wear jewelry, and if they buried their dead at all, the rituals were minimal. There is some low-quality evidence suggesting that flowers may have been placed in graves.

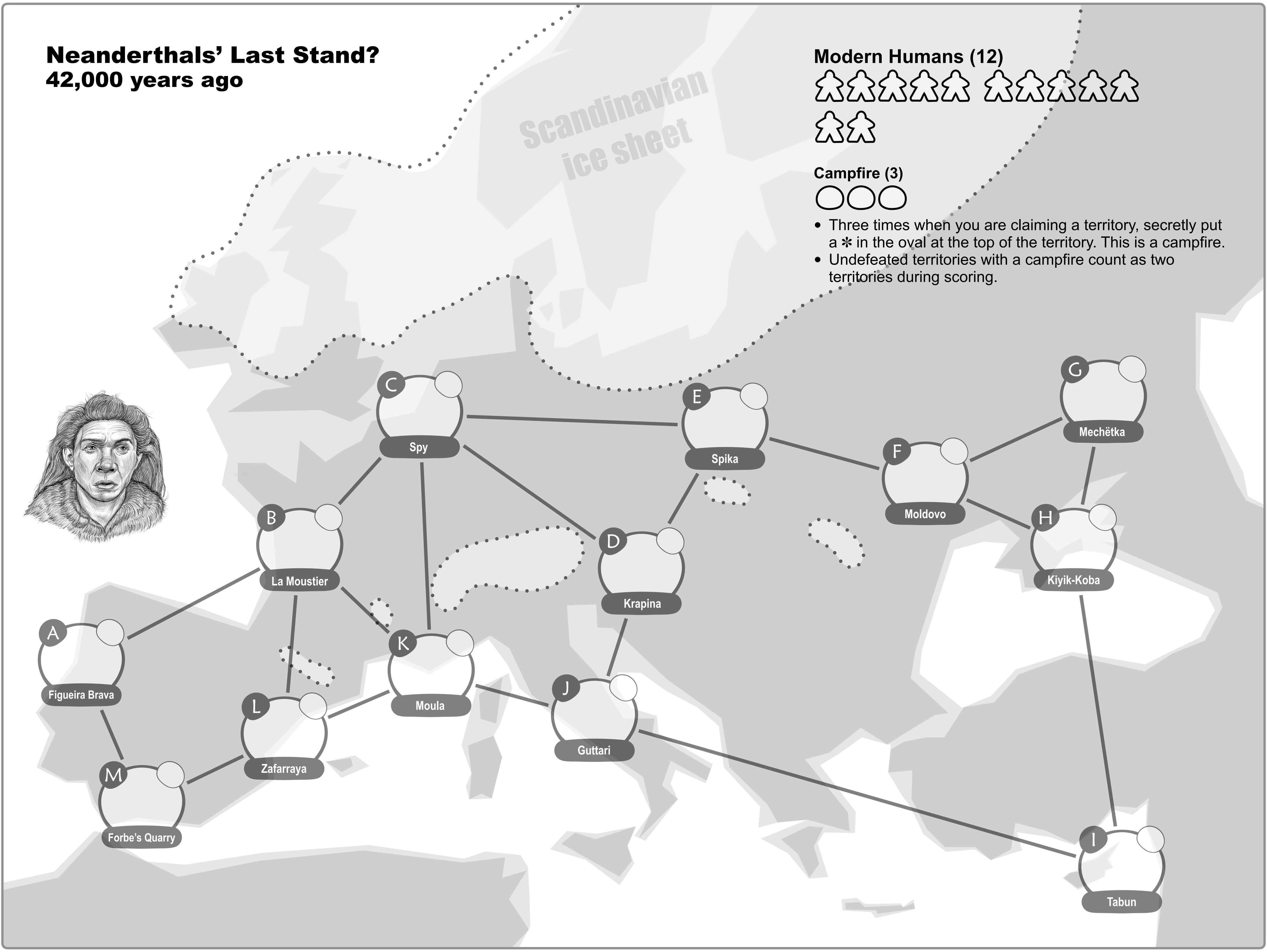
Challenging the cavemen stereotype, Neanderthals created customized clothing and there is moderate evidence that they were capable of building and using boats as early as 100,000 years ago.

The cavemen stereotype came to a screeching halt in 2010 when DNA analysis showed that *Homo sapiens* had interbred with *Homo neanderthalensis*, with 1 to 4% of European DNA tracing back to Neanderthals. The analysis also showed that low population densities among Neanderthals led to inbreeding, introducing harmful genes that would have been filtered out of the human genome over time. This suggests that the "1 to 4%" figure underestimates the extent of interbreeding, indicating that the two species were, in fact, closely related—perhaps not a separate species at all.

Homo neanderthalensis—the upgraded caveman







Walking to the New World 13,000 years ago

75,000 years ago, the Earth started through a very cold time called an Ice Age. Huge ice sheets covered the North. As the ice sheets got thicker and thicker, the oceans got lower and lower. New land appeared. One big bit of new land connected Russia and Alaska. Even though it was very far North, Beringia didn't have ice on it, so people could live there.

The people living in Beringia were some of the first to come to North America. When the ice started to melt about 13,000 years ago, 1000 to 2000 moved south and became known as the Clovis people. They were really good at making arrowheads, which helped them hunt giant animals like woolly mammoths, giant sloths, and bison.

Before the Clovis people, other groups had also come to North America, but they spread out too quickly which resulted in critically low population density and inbreeding. The Clovis people avoided this fate and today most Native Americans are their descendants.

The Clovis people—walking south



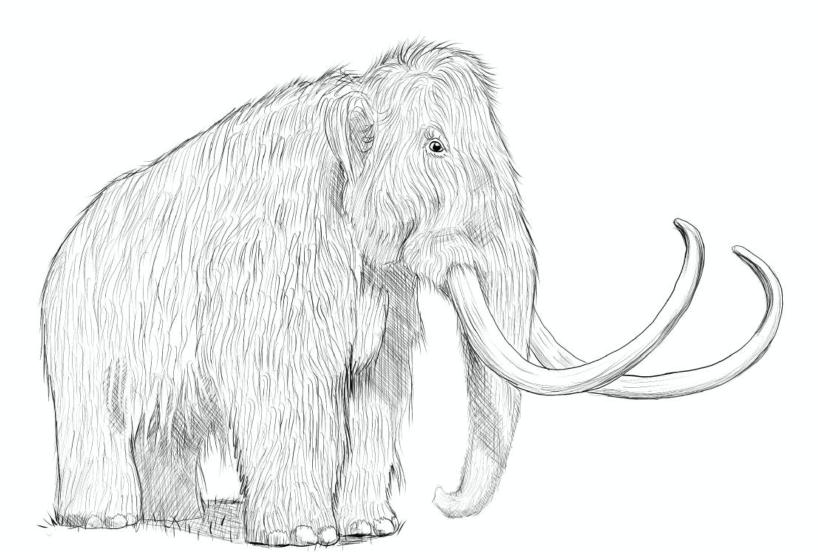
Walking to the New World 13,000 years ago

- Territories must be claimed in alphabetical order.
- You may claim one or two territories each turn.
- If you claim two, they must have the same strength.



Clovis Peoples (19)

\(\lambda \lambd





The First Big Building 11,500 years ago

We are at Göbekli Tepe, an archaeological site in southern Türkiye (Turkey). Around us are the remnants of a big building—the oldest known structure that wasn't used for shelter. It contains three circular rooms, each 10 to 20 meters in diameter, each with a pair of five-meter-tall interior pillars. Throughout the building, animals are carved into the stone.

Some carvings appear to record the 365-day solar year and the lunar cycle of 29 to 30 days. Think of some neolithic genius meticulously observing and recording this data. He or she might be on par with the greatest human thinkers, but we will never know more about them.

Göbekli Tepe was almost certainly built as a religious site, blending celestial events and local wildlife into a unified belief system. Though we can never reconstruct this ancient religion, we have some intriguing hints. One clue comes from the practice of excarnation (sky burials), where bodies were left exposed to nature and scavenging birds. Vultures, which frequently appear in the site's carvings, might have symbolized the cycle of death and rebirth.

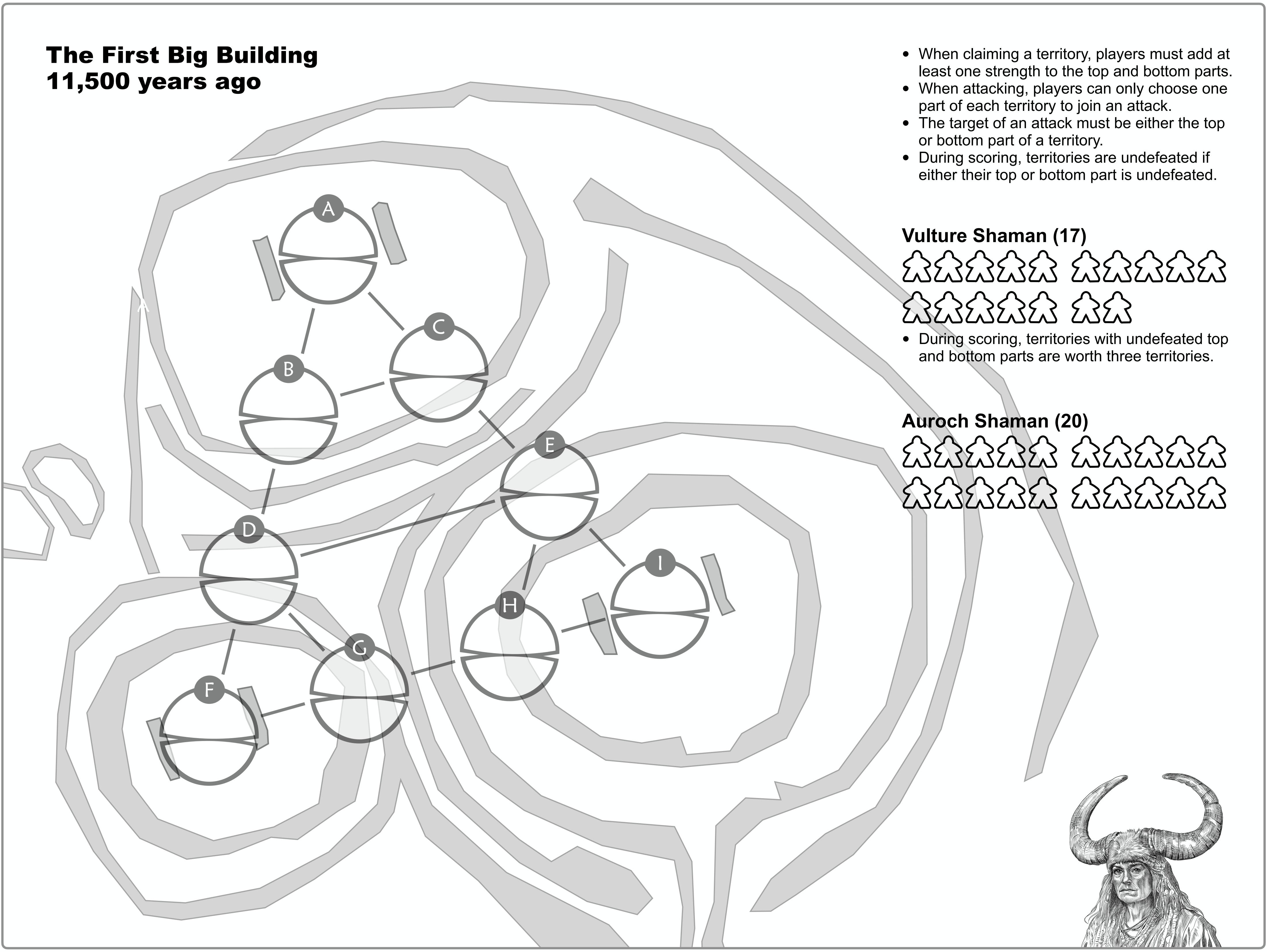
Another nearby archaeological find adds another clue: a woman buried with the skull of an auroch, a big-horned ancestor of cattle. DNA shows cattle weren't domesticated until a 1000 years after these circular rooms were built, but perhaps aurochs were beginning to be tamed. These powerful animals would have been impressive! An adaptable religion might well have put the domesticated auroch on an ascendant path to divinity.

In prehistory its sometimes fun to get creative. Don't put faith in this vulture-auroch religion or in the horned headdress.

Shamanic cattle wrangler

Thanks to Cillian (10), Niamh (7) and their dad for all the play-testing and suggesting this Wiki History topic.





The Rise of Agriculture 11,500 - 9500 years ago

In the early days of human civilization, there was a shift from hunting and gathering to farming. While agriculture allowed for the development of cities and complex societies, it also came with downsides. Early farmers were not as healthy. Hunting and gathering provided a varied diet, with access to fresh fruits, nuts, and lean meats, whereas early farming communities often relied on a more limited range of crops. This limited diet, combined with the close proximity of humans and animals in settled communities, led to the spread of diseases and malnutrition.

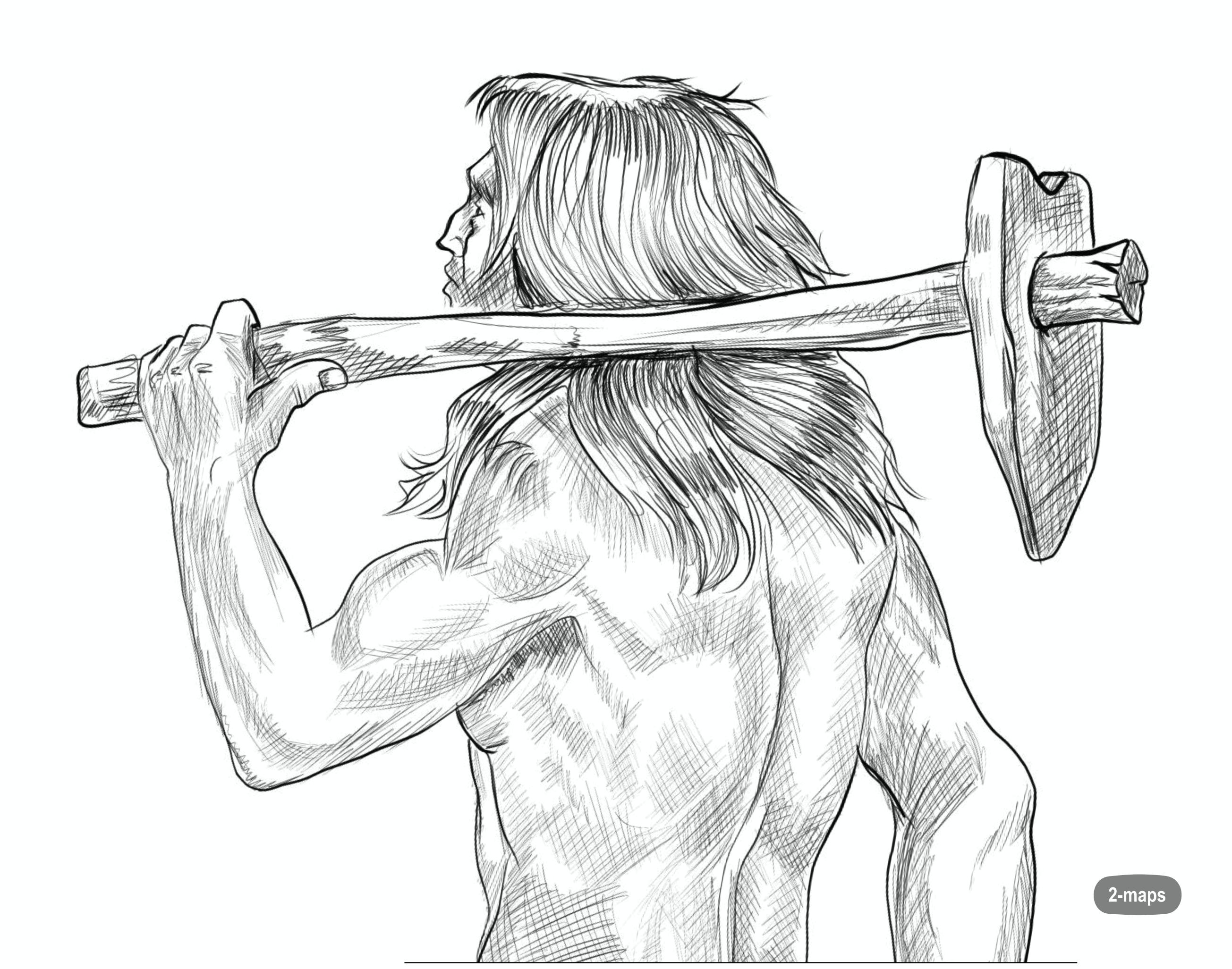
Despite the health issues, complex farming civilizations spread world wide, but not with equal vigor. The civilizations of Eurasia developed quicker than those of the Americas and Africa. Why?

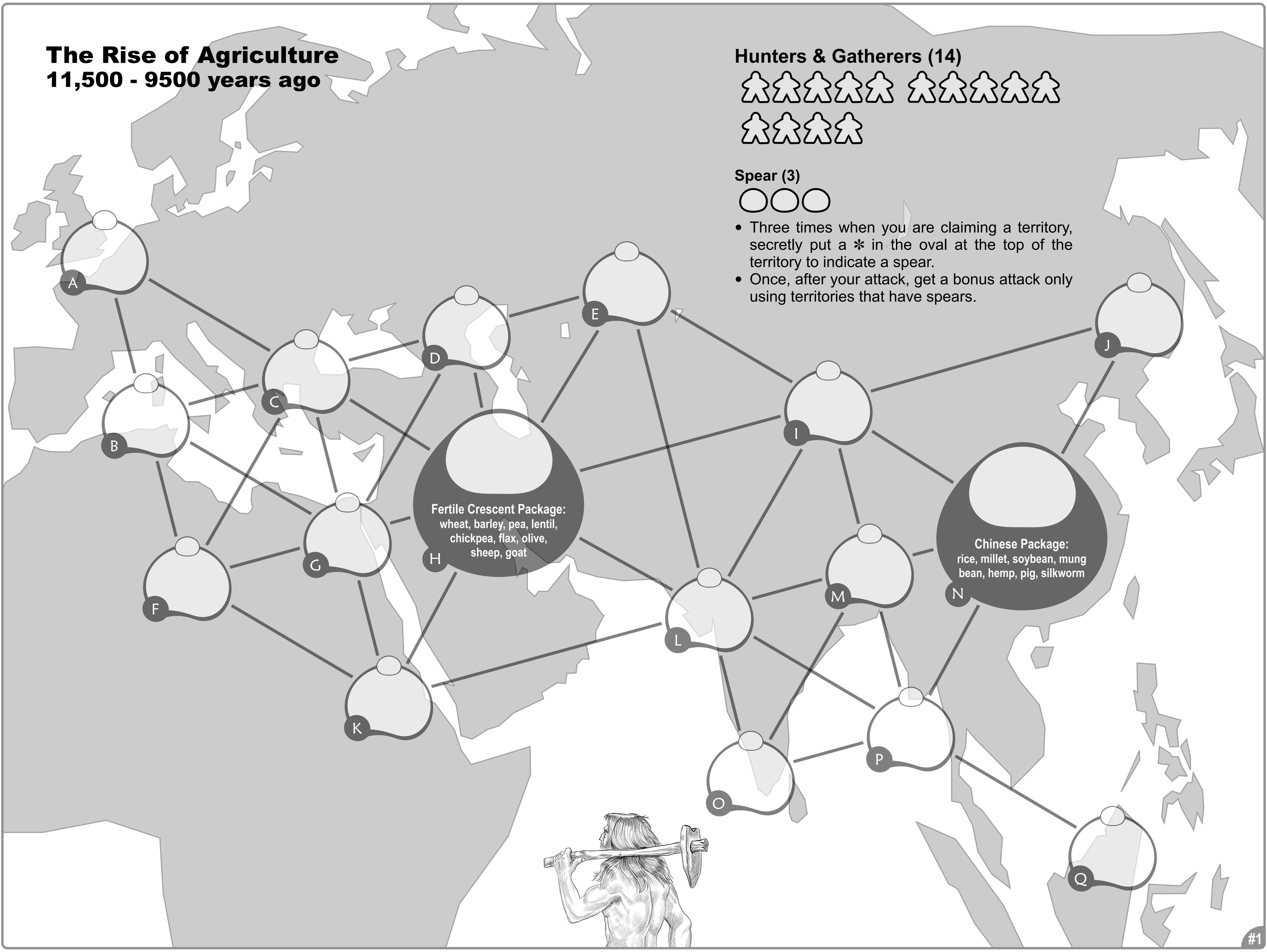
Geographer Jared Diamond, in his book *Guns, Germs, and Steel*, offers one explanation. He argues that the geography of Eurasia, with its long east-west axis, allowed for the rapid spread of agriculture. Moving across similar latitudes meant that the climate was relatively consistent, making it easier for crops and livestock to spread and thrive. In contrast, Africa and the Americas had long north-south axes, where climatic conditions varied dramatically over short distances. This made it more difficult for agricultural practices to spread, slowing the development of civilizations in these regions.

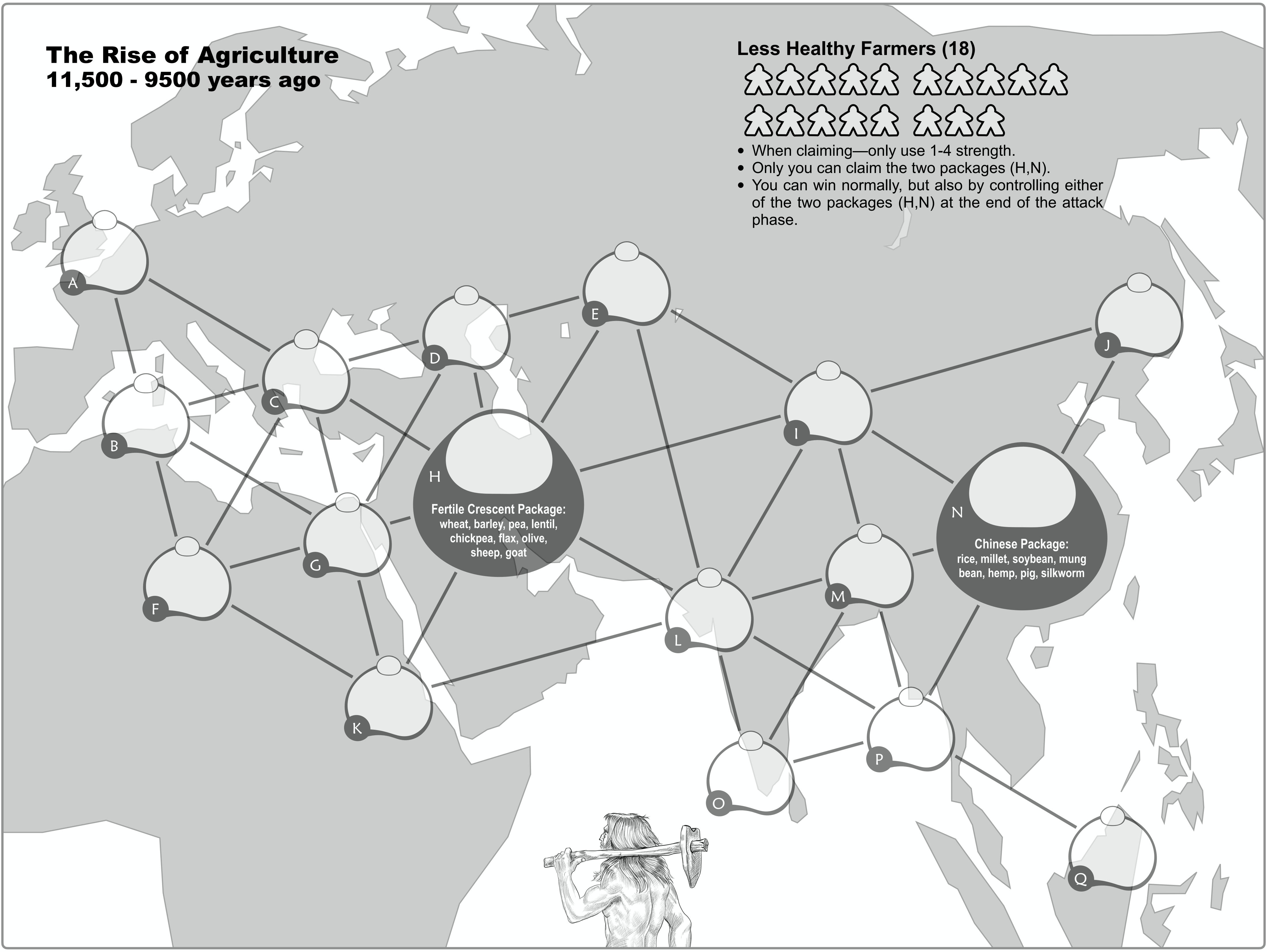
An alternate theory comes from economist Luigi Pascali, who focuses on the type of crops that were domesticated. In Eurasia, the agricultural package was grain-based, including wheat, barley, and rice. These grains could be harvested and stored for long periods. However, their storability also created a new problem: theft. The risk of grain being stolen meant that societies had to develop ways to protect their food supplies. This need for protection contributed to the creation of more complex societies.

In contrast, the agricultural packages in the Americas included tubers like white potatoes, sweet potatoes, and cassava. Unlike grains, tubers spoil quickly and cannot be stored for long periods. This reduced the risk of theft and, in turn, meant that societies had less need to develop complex systems to protect their food supplies.

Eagerly awaiting the delivery of a food package.







Upper vs. Lower Egypt 3100 BCE

Upper Egypt lies upstream along the Nile, characterized by its narrow river valley bordered by desert, while Lower Egypt encompasses the fertile, expansive delta that opens onto the Mediterranean. The distinction between Upper and Lower Egypt was more than just geographical; it represented two distinct cultural and political regions with their own deities, crowns, and customs.

The annexation of Lower Egypt by Upper Egypt is attributed to Pharaoh Narmer. His victory is celebrated in a bit of propaganda called the Narmer Palette where he is depicted wearing the crowns of both Upper and Lower Egypt. Narmer likely used surprise and speed in his campaign, moving downstream on the Nile, where the current would have aided his rapid, unexpected strikes. His ability to deploy forces quickly along the river likely allowed him to catch Lower Egyptian forces off guard, giving him a tactical edge.

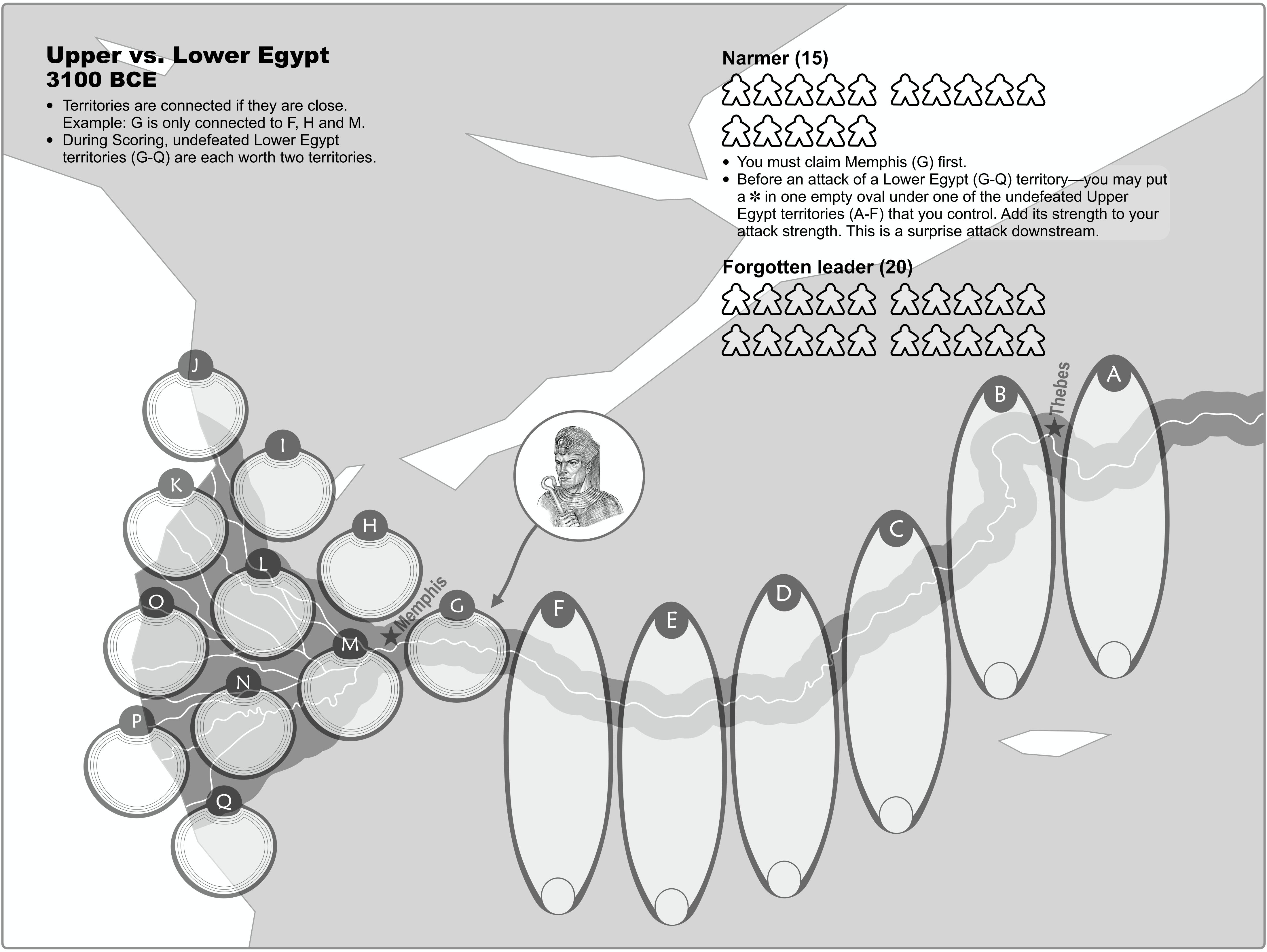
However, Narmer's conquest wasn't just a military achievement; it was also a display of psychological power and legitimacy. The Narmer Palette not only shows his military victories but also presents him as a ruler who had the divine right to rule both regions, reinforcing his dominance through symbolic imagery. His use of cultural symbolism, such as the crowns and deities of both regions, helped solidify his claim to rulership and may have encouraged local rulers to accept his authority with less resistance.

In later Egyptian history, Pharaoh Menes was credited as the first ruler of a united Egypt, founder of the First Dynasty, and builder of the capital at Memphis—strategically located at the juncture of Upper and Lower Egypt.

Could Menes and Narmer be different names for the same person?

Pharaoh Narmer:
Unifier of Upper and Lower Egypt





Indus Valley Civilization 3000 BCE

Most ancient civilizations had significant violence and big gaps between the rich and poor. The Indus Valley Civilization is the exception.

Unlike its contemporary civilizations that boasted grand palaces and monumental structures, the Indus Valley's most imposing architecture is the Great Bath at Mohenjo-daro. Despite its name, this is a modest structure measuring 12 meters (40 ft) by 7 meters (23 ft). Compare that with the 146 meter (481 ft) height of the Great Pyramid of Giza.

The bath might seem unimpressive—especially coming from a civilization that had three times the population of pyramid-building-Egypt. However, the bath hints at the true brilliance of the Indus Valley Civilization... It was the world leader in hydraulic engineering, irrigation, hygiene and water distribution. In its cities, the homes of common people had their own water supply and sewage was channelled to run beneath city streets.

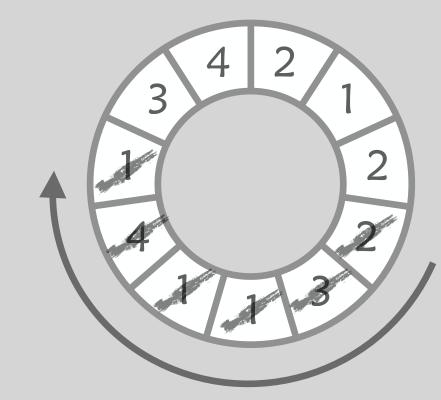
It was also the world leader in quality of life. If you're an ordinary person with a time machine and was forced to take a one-way-ticket back to the ancient world—the Indus Valley Civilization might be your best chance at a happy life.

Indus Valley Citizen: happy & hygenic

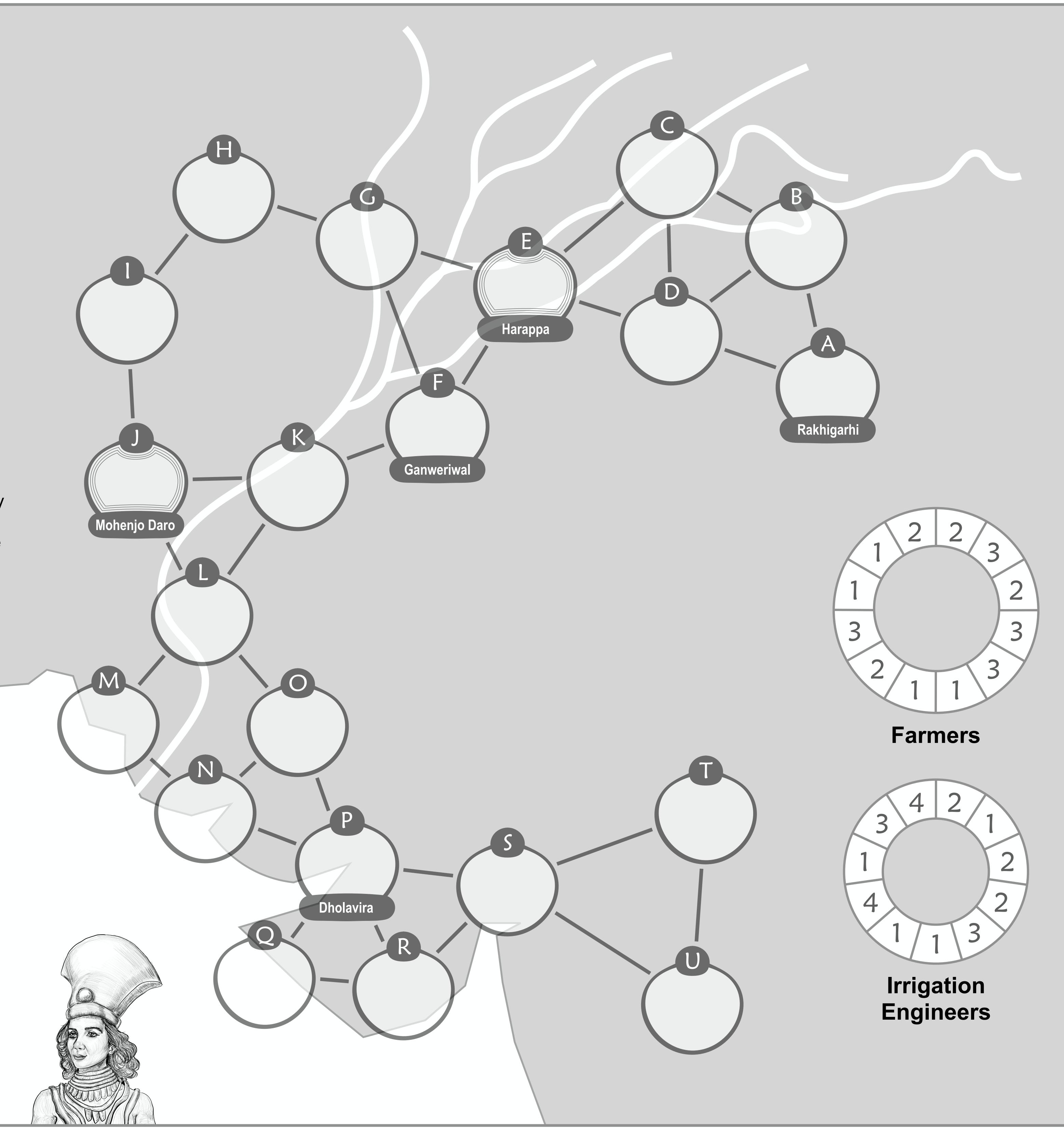


Indus Valley Civilization 3000 BCE

- This is a collaborative game. Players win only if the scores are equal.
- Starting with the farmers, both players cross off any number on their number wheel and claim a territory with that strength.
- From then on, both players cross off the next position going clockwise...



- If possible, players must always claim a territory connected to the last territory claimed by the other player, otherwise they can claim any territory.
- Continue claiming territories until there are none left on the map. There will be one unused on both number wheels.
- When attacking, players must make a successful attack if possible.
- During scoring Harappa (E) and Mohejo Daro (J) are worth two territories.



Epic of Gilgamesh 2900 BCE

The Sumer Civilization was in the middle of the known world. It connected places like the Indus Valley, Egypt, and Crete.

Gilgamesh was a king of a city called Uruk, which was part of the Sumer Civilization. There's a very old story about him called *The Epic of Gilgamesh*. It's the oldest story ever written down! In the story, Gilgamesh meets a strong man named Enkidu. At first, their armies had a big fight, but then Enkidu and Gilgamesh became best friends. Together, they fought and defeated lots of big, strong monsters.

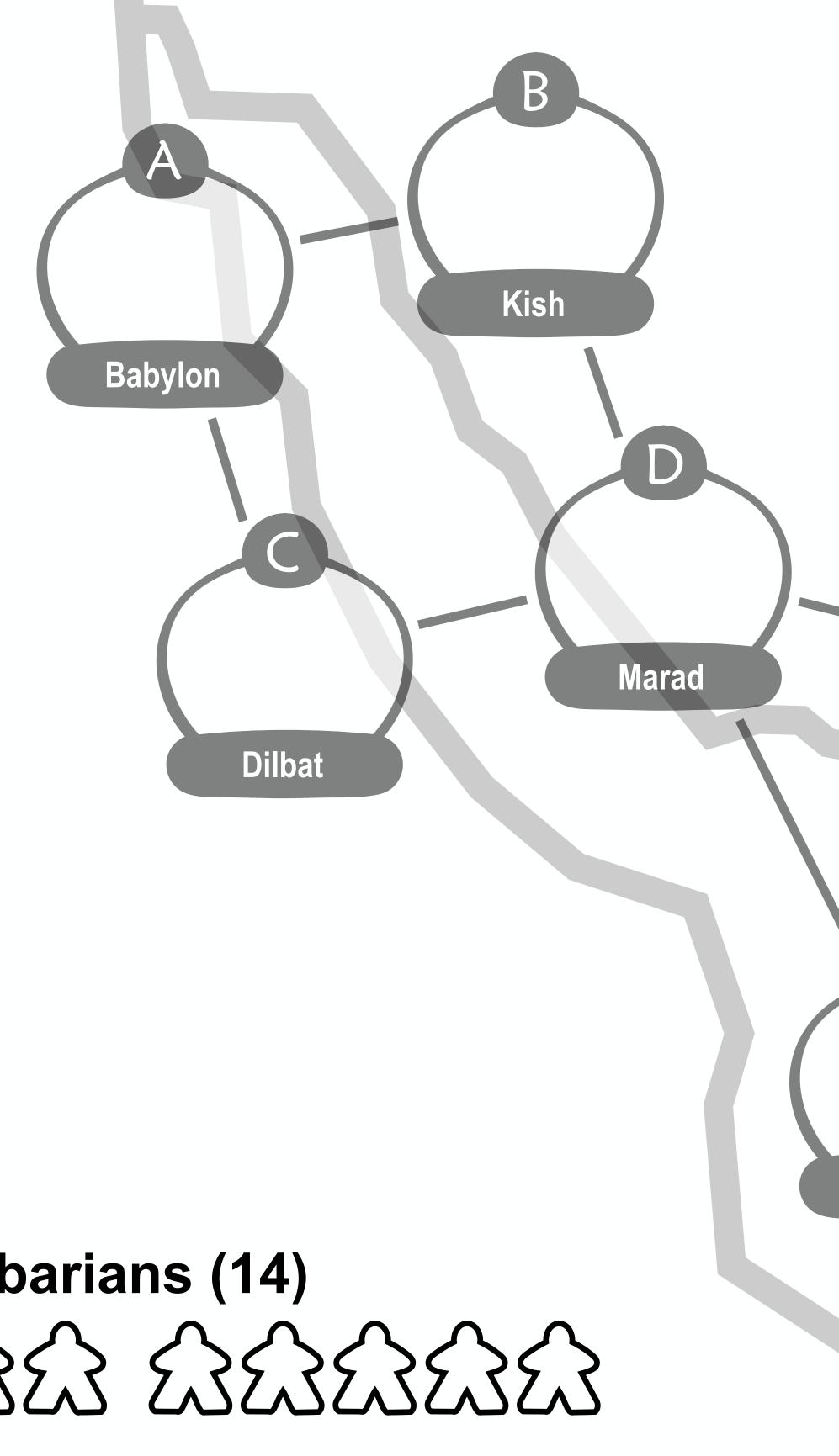
Sadly, Enkidu got sick and died. Gilgamesh was so sad that he went on a long journey to try to find a way to bring Enkidu back to life and to avoid death himself. He talked to a wise man who asked him to stay awake for a week. When Gilgamesh failed at this, he realized that he couldn't defeat sleep so he certainly couldn't defeat death.

Gilgamesh returned to his city, a little wiser and a little older.

Gilgamesh—getting older each day



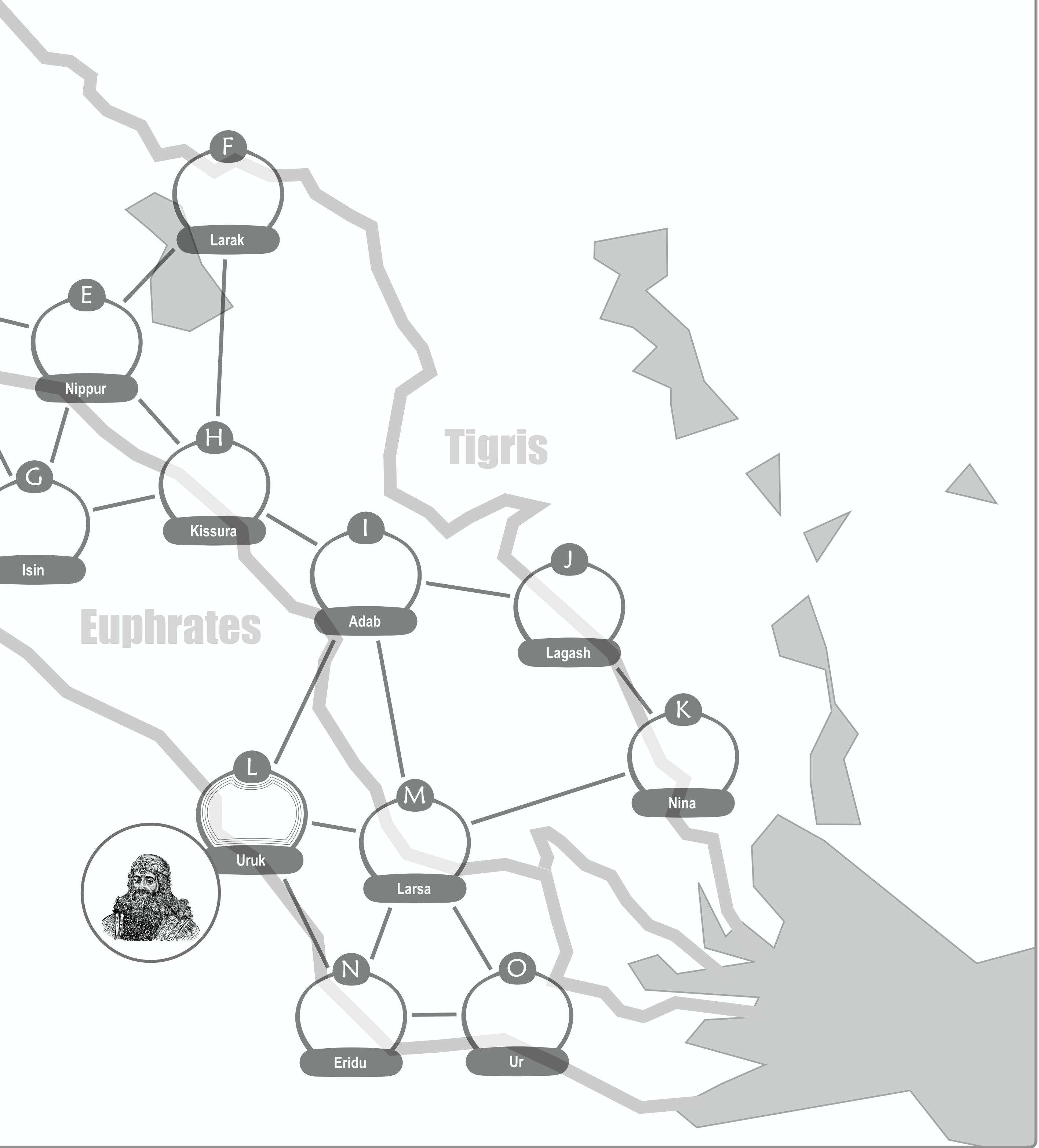
Epic of Gilgamesh 2900 BCE



Enkidu's Barbarians (14)

Gilgamesh's Sumerians (12)

- Enkidu's Barbarians cannot claim Uruk.
- During scoring, an undefeated Uruk is worth two territories.



Norte Chico Civilization 2600 BCE

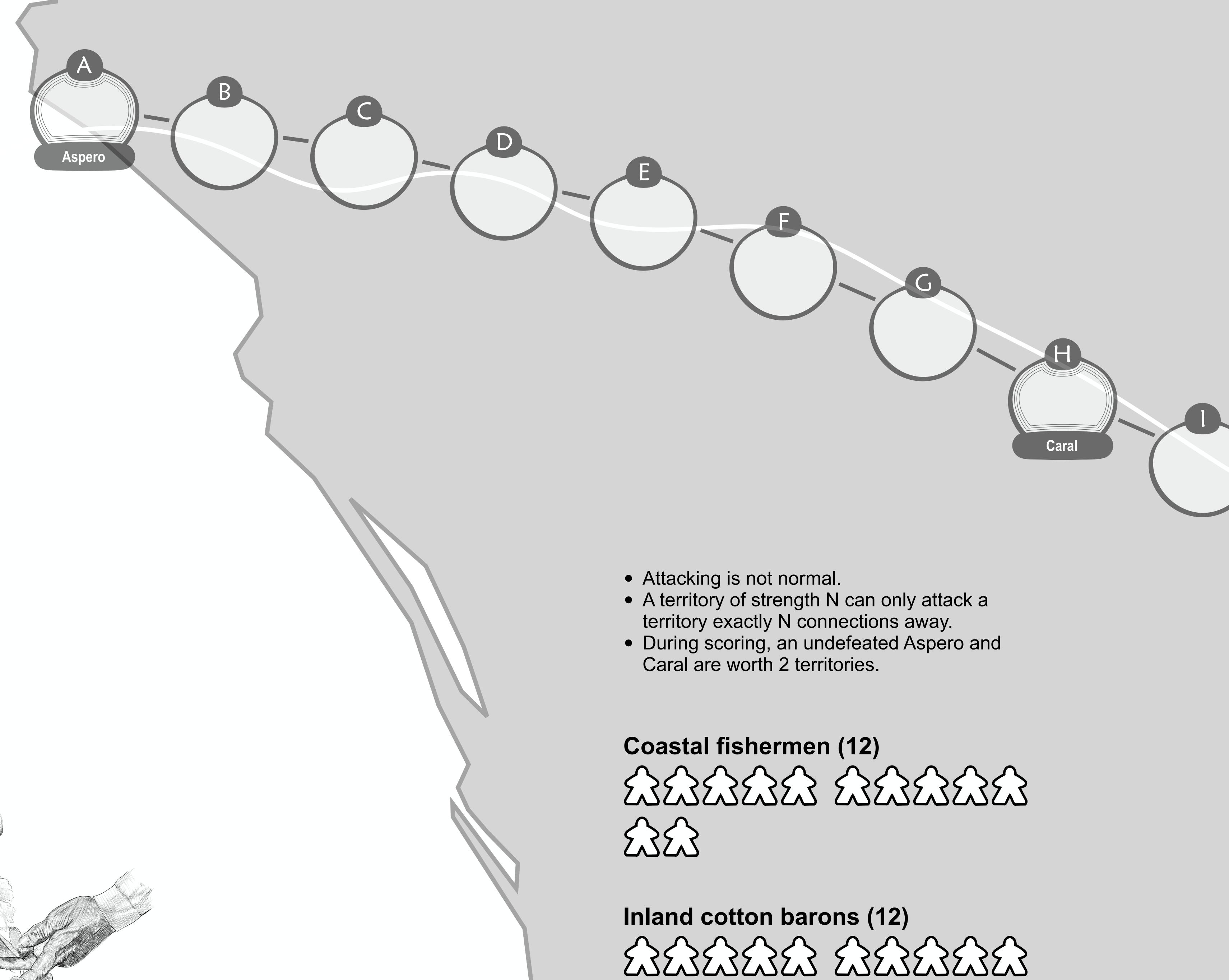
The Norte Chico Civilization is one of the oldest in the Americas. It emerged along the arid coast of present-day Peru. This early civilization was marked by a unique power dynamic that arose from the inland cities' control over cotton production. Cotton was a critical resource, as it was used to make fishing nets and clothing—essential goods for the coastal fishermen who relied on these nets for their livelihood. The inland cities, with their monopoly on cotton production, were able to assert political dominance over the coastal communities.

However, the balance of power could have easily shifted in the opposite direction. The fishermen, who provided the essential fish that sustained both the coastal and inland populations, could have used their control over this vital food source to gain the upper hand.

cotton-picking-power



Norte Chico Civilization 2600 BCE



Anatolian Language Evolves 2500 BCE

How did language evolve? It might seem obvious that it evolved from the vocalizations of our primate ancestors. For instance, some primates have one warning screech for terrestrial predators and a different warning screech for flying predators. Could human language have evolved from such screeches? Perhaps, but there's compelling evidence that language may have evolved from primate gestures rather than sounds. The same part of the brain used for human speech is activated in monkeys when they perform or watch hand gestures. This suggests language may have begun as gestural communication, with repeated mimicry playing a key role in passing down skills—"monkey see, monkey do."

The chimpanzee Washoe (1965-2007) learned around 350 words of American Sign Language, showing more success with gestures than with vocal communication. This contrasts with many failed attempts to teach chimpanzees to use sounds to communicate.

For our Homo erectus ancestors, campfires provided opportunities to improve communication over thousands of years. Groups that could better communicate vital information had an evolutionary advantage, spreading their genes more effectively.

As human groups migrated and lost contact, different "species" of language emerged, reaching a peak in variety thousands of years ago. Since then, the number of languages has steadily declined, with only about 6,000 languages remaining today and the big-budget languages increasingly taking over.

With the invention of sound recording by Édouard-Léon Scott de Martinville in the 1850s, for the first time, we could hear the voices of previous generations. Cinema and popular music recordings tether languages to their past. English will evolve more slowly because some of our great grand-children will watch Star Wars and listen to the Beatles. Hindi will evolve more slowly because of Bollywood.

Voice and hand





