

Crashing Plates and Big Ice.

The Climate Has been Changing for Quite a While.

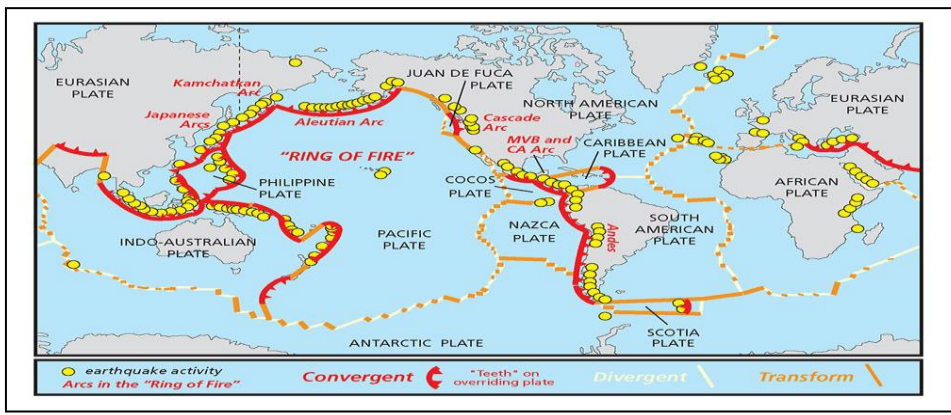
ROCKIN' AND ROLLIN'.

We struggle to fully appreciate the impact of the shifting Tectonic Plates and the Ice Ages. They happened a really long time and the “to and fro” of massive ice sheets over hundreds of millions of years, combined with tectonic plate shifts, was the original “rock and roll” era; the land was formed, and reformed, with dramatic fluctuations in sea levels.

CRASHING “PLATES”: The World Settles In.

The shifting tectonic plate story is hard to fathom. Michael Grunwald tells the story as he describes the formation of the Everglades, “It began with a bang about 300 million years ago [MYA], after the fish but before the birds, with the cataclysmic shifts of tectonic plates that crunched the planet’s major landforms into a single supercontinent called Pangaea.” “About 100 million years later, plates shifted again, Pangaea split up again, and North America dragged away a finger-shaped chunk of North Africa. That hijacked appendage became the foundation of the Florida peninsula, the Florida Platform...”.

Crashing Plates and Formation of the Continents	
The Earth coagulates as a solid sphere in the Solar System	4.5BYA
The Super Continent of Ur forms	3.0BYA
Other continents form:	
• Artica forms separately	2.5BYA
• Baltica and Atlantica emerge	2.0BYA
Antarctica forms and merges with Artica and Baltica to form Nena	1.5BYA
Nena, Atlantica and Ur	
• join together to form single supercontinent Rodina	1.0BYA
• then split apart	700MYA
Pangaea, the last supercontinent, re-forms from Nena, Atlantica and Ur	300MYA
The Age of Dinosaurs 230 – 65 MYA	
Pangaea begins to break into the two multi-continent land masses we have today: Laurasia and Gondwanaland,	200MYA
Source:	
• “In the Beginning, There was Ur” [6].	
• The Author’s compilations from the Readings.	



Source: Oceanservice NOAA.gov

BIG ICE.

Our current focus on global warming is important, but the diary of the earth, measured in millions of years, has recorded periods when there was no ice to be found on our planet, and other recent periods when the glaciers advanced in the U.S. as far south as the Ohio Valley. Sea levels fluctuated by 600 feet.

The Cambrian Explosion.

For most of the nearly 4 billion years that life has existed on Earth, evolution produced little beyond bacteria, plankton, and multi-celled algae. But beginning about 600 million years ago in the Precambrian, the fossil record speaks of more rapid change. First, there was the rise and fall of mysterious creatures of the Ediacaran fauna, named for the fossil site in Australia where they were first discovered. Some of these animals may have belonged to groups that survive today, but others don't seem at all related to animals we know.

Then, between about 570 and 530 million years ago, another burst of diversification occurred, with the eventual appearance of the lineages of almost all animals living today. This stunning and unique evolutionary flowering is termed the "Cambrian explosion," taking the name of the geological age in whose early part it occurred. But it was not as rapid as an explosion: the changes seem to have happened in a range of about 30 million years, and some stages took 5 to 10 million years. **LINK:** https://www.pbs.org/wgbh/evolution/library/03/4/I_034_02.html

The Age of the Dinosaurs.

Dinosaurs lived during the Mesozoic Era (252 to 66 million years ago), often called the "Age of Dinosaurs." The Mesozoic Era is divided into three time periods, the Triassic, Jurassic, and Cretaceous.

**Four Memorable Ages of Ice:
From the First Known Ice Age to
the Current Stability of the Seas**

Huronian [theoretical]	2.7 – 2.3 BYA
Proterozoic period Ice Age Known as "Snowball" Earth	800 – 600 MYA
<i>Cambrian Explosion</i>	<i>570 – 530 MYA</i>
Late Ordovician and Silurian period Ice Age	460 – 430 MYA
Pennsylvanian and Permian period Ice Age	350 – 250 MYA
<i>The Age of Dinosaurs</i>	<i>252 – 66 MYA</i>
Late Neocene to	
Quaternary period Ice Age	Began 40 MYA
• The Bering "bridge" 1 st Opened	28 – 23,000 YA
• Maximum Recent Ice	20,000 YA
• The Bering "bridge" Re-opened	14 – 10,000 YA
• Most Recent Glacial period ends	10,000 YA
• "Ice" still in Canada	6,000 YA
[Florida first surfaces as an Island 50 MYA]	
• Florida sea level and climate stabilized to current conditions	5,000 YA

Sources:

- [Ice Ages, When have Ice Ages occurred? \[7\].](#)
- The Author's compilations from the Readings.



THE “CROSSING”: Asians Discover America

Well before the European’s found Florida, men and women from Asia made their way across the Bering strait land “bridge” to the western shore of North America. “The glaciological evidence”, reports J. Bronowski, points to two possible times when men might have wandered from the easternmost promontories of the Old World beyond Siberia to the rocky wastes of western Alaska in the New.

- One period was between 28,000 BC and 23,000 BC, once controversial, this estimation is growing in favor.
- A Second Period between 14,000 BC and 10,000 BC.”

Even with the “bridge” opened, man may not have crossed since the earliest physical evidence in Alaska dates to 14,000 YA. However, with sea level 600’ below current levels, much evidence may be lost, i.e., or at least underwater.

There is general agreement that the Bering Straits land “bridge” flooded 10,000 years ago with the receding ice, and remains the waterway it is today.

Man, by the time of the crossing, was finally modern man, a *Homo sapien sapien*. Having been a distinct species for 250,000 years, modern man began to flourish as the most recent glacial period started to recede about 35,000 YA. With the disappearance of our Neanderthal Cousins [70,000 to 35,000 YA], we have been the only species of human beings on earth for the last 30,000 years.

With the opening of the Bering “bridge”, this energized modern man found a new frontier. The American continent became *easily* accessible with the opening of the Bering Bridge. Asians arrived and *quickly*, a relative term, migrated all the way to South America.

Florida’s Physical Stabilization and First Peoples The Beginning of the Current Ice Age to the Archaics.	
Biscayne Aquifer, Atlantic Coastal Ridge formed	100,000 YA
Beginning a 5,000 year period of the Bering Strait land “bridge”	28,000 YA
First American settlers	20,000 YA
Beginning of a second period of 4,000 yrs when the Bering “bridge” re-opens	14,000 YA
Entire Florida Platform emerged for good;	12,000 YA
The Last glacial Ice withdrawals; The Bering Strait land “bridge” floods for the last time.	10,000 YA
Sea levels fluctuations end	10,000 YA
Florida sea level and climate stabilized to current conditions	5,000 YA
Sources: Author’s compilation from The Readings.	

FLORIDA EMERGES AND POPULATES.

Michael Grunwald observes, “In the last ice age, low seas exposed the entire Florida Platform, or Plateau, as well as the land bridge across the Bering Strait. The Paleoindians crossed to North America 12,000 years ago. Those hunter-gatherers journeyed down and across the continent to discover a supersized Florida, twice as wide as it appears today. It was cooler and dryer, with fewer lakes and rivers.” The Asians arrived and stayed.

Grunwald goes on to tell us...“In the last ice age, low seas exposed the entire Florida Platform, as well as the land bridge across the Bering Strait that the Paleoindians crossed to North America 12,000 years ago [YA].

Those hunter-gatherers journeyed down and across the continent to discover a supersized Florida, twice as wide as it appears today. It was cooler and dryer, with fewer lakes and rivers.” ...“It was only about 5,000 years ago – after prehistoric man was already writing, making pottery, smelting copper and brewing beer – that seas approached current levels and modern climate conditions prevailed.” The arrival of the Paleoindians was the beginning.

The Florida Plateau was an unsettled place until, say, 6,000 years ago when the Asians arrived and the form of the land stabilized a thousand or so years later.

Florida has been coming about for a long time. In retrospect, for hundreds of millions of years this has been a happening place with four major ice ages atop the shifting about of the earth’s tectonic plates, the great mammalian migration to escape the ice back in the millennia of the 10,000’s and the coming of man.

**THE BEGINNINGS OF MODERN FLORIDA
The Paleoindian Infusion to Cultural
Differentiation**

First Migrations from Asia to North America

Paleoindians crossed the
Bering Strait “land bridge” 28,000 – 23,000 YA
And/or 14,000 - 10,000 YA

**Culturalization Periods of North America
from The National Parks Service**

- Paleoindian 13,450- 11,450 YA
- Archaic 11,450 - 3,200 YA
- Woodland 3,200 - 1,000 YA
- Mississippian 1,000 - present

Mammalian experience:

- migration to Florida 15,000 YA
- general extinction 10,000 YA

Culturalization Periods of Florida

- Paleoindians appear in Florida 14,000 YA
- Archaics emerge in Florida and Georgia. 6,000 YA
- Florida sea level and climate stabilized to current conditions 5,000 YA
- The Archaics began making pottery 4,000 YA
- People in southeast North America began cultivating corn and squash to supplement what they gathered”, 3,000 YA

Cultural distinctions emerge amongst the Florida Archaics 2,500 YA

- Northwest Florida cultures [Appalachians] connect with trading cultures, enter Woodland Period A.D. 100
- Central and South Florida cultures [Timucuan, Calusa, Tekesta] remained isolated with subsistence economies until European contact. A.D. 1513

Source:

- The National Parks Service [6]
- Author’s compilations from the Readings

MODERN FLORIDA, Pre-Ponce Cultural Differentiations

The Paleoindians who crossed the Bering bridge migrated to the east and south. The name given the first migrants to reach the southern United States is The Archaics. They were hunter-gatherers with some rudiments of agriculture. Most of Florida’s inhabitants stayed in this mode of subsistence until European contact.

The peoples in northwest Florida transcended into an agrarian society and have been classified as members of the Woodlands culture. However, the Archaics in central and southern Florida became known by a number of names as archaeologists differentiate between many distinct groups of peoples, but the main societies were [the quoted material is Mark Derr’s]:

- **The Deptford People** - “Over the next millennium, the Deptford people around Tampa Bay created a new style of village design, which featured permanent mounds, constructed not of trash but of soil hauled from the surrounding countryside”.
- **The Weeden Island Culture** – “So pronounced was this development of the Deptford People by around A.D. 500 that archaeologists have designated it as the Weeden Island culture...”. With the Weeden Island group, “...apparently for the first time, Florida Indians established large villages that functioned as independent political entities or capitals of a circumscribed territory.”The Weeden Island Culture inherited the Archaic realm; they built large villages and governed multi-village territories. The settling of the land soon necessitated its defense.
- **The Fort Walton Culture** - “Invading groups from the powerful Mississippi culture of the southeast repeatedly overran Georgia and north Florida between A.D. 800 and 1000 and finally absorbed the indigenous Weeden Island people...and firmly established a new society in the valley of the Apalachicola River, which archaeologists refer to as the Fort Walton culture.”

THE AFTER-PARTY.

The Asians occupied the Americas for 14,000 years without knowing the rest of the world existed. By the time Ponce de Leon set foot on the Florida beach in 1513, after 14,000 years of settlement, there were 100,000 Floridians in four distinct cultures on hand to greet him. Five hundred after Ponce, the Florida resident population numbered nearly 20 million people with more on the way.

Florida Residents when Ponce Landed A.D. 1513	
<u>Cultures in Florida</u>	<u>Population</u>
<ul style="list-style-type: none"> • “Timucua Confederation of fifteen separate and sometimes warring groups occupied the northern third of the peninsula: <ul style="list-style-type: none"> ○ Western Branch: Potano,, Yustaga, Ocale, Utina, Osochi. ○ Eastern Branch: Saturiwa, Acuera, Freshwater. ○ Tocabaga, alternatively under the Timucua and Calusa 	48,000
• Calusa occupied southwest Florida to Cape Sable, inland to Lake Okeechobee.	20,000
• Tekesta, with the Jeaga, Ais and others, occupied southeast Florida from Florida Bay to Biscayne Bay.	7,000
• Apalachee, the Panhandle heirs of the Fort Walton people, controlled the trade routes from the upper Gulf coast and Mississippi valley.	25,000
Total Population	100,000
Source: Author’s compilations from the Readings	

READINGS ABOUT FLORIDA'S PAST

James Michener did not write *Florida*, but he could have. The material for a good story is there as Mark Derr understands and presents in his *Some Kind of Paradise*...a great read.

Michael Grunwald extends the historic literature with *The Swamp*, an equally entertaining vehicle for learning about our patrimony.

The novelists have contributed; Patrick Smith's classic novel, *A Land Remembered* and the contemporary Florida mystery writers all seem to cherish the paradise that was Florida. They each, in their own way, present their visions in an evocative form.

This essay intends to provide a straightforward Annotated Chronology of the period from the formation of the Earth to A.D. 1513. As with most simple tasks, complexities creep in. Every look behind the curtain has revealed more detail. This Annotated Chronology strives to meet two of the three "truth" standards... the truth [yes], the whole truth [not hardly] and nothing but the truth [yes].

The story of Florida before Ponce is a story without a precise history; dates were not recorded. Since there are no pre-Ponce chronologies in North America, researchers have reconstructed the story based on physical evidence. Dates of events and conditions are specifically stated, but estimates vary widely. The identification of the major cultures is fraught with details about specific tribes that fit within the overall scene. This essay is the author's compilation of these disparate and sometimes conflicting conclusions based on the Readings; each of which is fascinating and insightful.

THE READINGS

The following citations are the main sources of ideas and information in this essay. From these sources, an annotated chronology has been constructed to give a holistic view of Florida's pre-history and to give a general sense of the subject; and, if successful, to engender a curiosity for readers to explore further.

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5. Florida Under Five Flags, Rembert W. Patrick, University of Florida Press, 1955.
6. Guns, Germs, and Steel, Jared Diamond, W.W. Norton, 1997.
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8. "In the Beginning, there was Ur" by Elizabeth Zubritsky, <http://research.unc.edu/endeavors/spr07/ur.html>.
9. The Last Two Million Years, Reader's Digest History of Man, The Reader's Digest Association, 1974.
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12. The Swamp, Michael Grunwald, Simon & Schuster, 2006.