One of the Greats – The History of Lake Erie

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Lake Erie is an amazing geological feature that we are blessed with as Ohioans. Erie doesn't make it into the top 10 list of largest lakes; it is actually the 11th largest based on surface area. So close. I suppose you can't be the best at everything. An odd fact to note is that the deepest point of Lake Erie is only 210 ft, that makes it the only Great Lake above sea level even at its deepest location! The average depth is somewhere around 63 feet. That sounds quite deep; however Lake Superior has an average depth of 483 feet! Lake Erie is large enough to fit Delaware, Rhode Island, and Connecticut.

Lake Erie's journey to its current form, which is less than 4,000 years old, is a geological tale. It began over two million years ago as a lowland basin shaped by an eastward-flowing river. This ancient landscape was then dramatically transformed by multiple glaciers during the Pleistocene ice ages.

The initial glacier destroyed the existing river system, deepening and expanding the low-lying areas, which allowed water to accumulate and form a lake. The glaciers weren't uniform in their carving power; they eroded more land on the eastern side because the underlying bedrock there is softer shale. In contrast, the western side, composed of harder dolomite and limestone, resisted erosion more effectively. This differential carving explains why the eastern and central basins of modern Lake Erie are significantly deeper than the western basin, which averages a mere 25 feet deep and is teeming with nutrients and fish.

Between the advances and retreats of as many as three glaciers, several distinct temporary lakes formed. Notable examples include Lake Whittlesey, Lake Maumee, and Lake Arkona. The last of these, Lake Warren, existed between approximately 13,000 and 12,000 years ago. It was considerably deeper than today's Lake Erie, with its shoreline extending about eight miles (13 km) inland from the modern one. Early Lake Erie also underwent numerous phases, leaving behind ancient sand dunes visible in Northwest Ohio's Oak Openings Region.

The lake is teeming with flora and fauna. The Lake Erie water snake is a subspecies of the northern water snake and is endemic to this area. The snake plays a major role in keeping certain species population under control. Some notable plants include the lakeside daisy, fringed gentian, golden fruited sedge, and the coastal little bluestem grass. The coastal bluestem was last seen in Erie County in 1899, but new populations were found once again in 2024 inside the county's boundary.

Lake Erie, while not the largest, stands as a testament to geological forces and a vibrant ecosystem. Its relatively shallow depths, particularly in the western basin, contribute to its rich biodiversity and make it a unique freshwater habitat. From its ancient origins shaped by glaciers to its present-day

role as home to endemic species, this Great Lake continues to evolve. As Ohioans, we are indeed fortunate to have such a dynamic and historically rich natural wonder in our backyard, offering both ecological significance and a captivating story of geological transformation.