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Africa's Great Lakes

They are a shimmering outline of the Great Rift Valley, lakes that fill chasms and craters left by geologic forces still rending East Africa. Victoria, Tanganyika, and Malawi are among the world's ten largest lakes; Tanganyika's 4,800-foot plunge makes it the second deepest. The Great Lakes proper usually include Victoria and the lakes that curve to its west, but remarkable lakes also trace other arms of the complex Great Rift Valley, from Ethiopia down through Kenya and Tanzania. Streams feeding Lake Victoria from Rwanda and Burundi are the ultimate source of the Nile. Ancient Greeks believed that such a realm of water and mountains had to exist to give rise to that river, but only in the mid-19th century did British explorers seeking the source become the first outsiders to accurately put the lakes on the map.

East African Rift System
 The Great Rift Valley is not one continuous formation but a series of rift valleys of related origin. Tectonic plates that once merged to form Africa have been moving apart—or rifting—stretching and fracturing Earth's crust. The rifting was set in motion more than 30 million years ago when plumes of superheated rock rose beneath the crust, causing it to bulge and thin. The brittle crust fractured, creating valleys bound by mountains and escarpments.

Ethiopian Rift
 Here the Great Rift cleaves the Ethiopian Highlands, a towering expanse of eroded volcanic basalt. Ethiopia's rift is the oldest, dating from when the Arabian Peninsula began to break from the continent 30-25 million years ago. Its lakes, alkaline with minerals leached from volcanic soil, are vital stopovers for migrating waterbirds. Human needs take a toll: The national park around Lakes Abijatta and Shalla is occupied by subsistence farmers and herders.

Lake Victoria and the Tanzania Craton
 Africa's largest lake is shallow, only 270 feet deep. Victoria doesn't fill a great fracture, as does Lake Tanganyika; it's a depression created when a deep plume of superheated rock thinned the crust. Two arms of the Great Rift Valley, the Western Rift and Eastern Rift, were forced to part around the lake because it sits on a formation called the Tanzania craton. A craton is a block of rock a billion or more years old, too hard and thick to be split by rifting.

Eastern Rift
 From Lake Turkana south, volcanism is the signature of the Eastern Rift, home to Africa's tallest mountain, the now dormant Kilimanjaro. Still erupting, Tanzania's Ol Doinyo Lengai is sacred to the Maasai. Fertile volcanic ash created the wildlife-rich grasslands of the Serengeti Plain. The rift's lakes and hot springs are mainly shallow and alkaline from volcanic soil. They nourish a type of algae that feeds the largest concentration of flamingos on Earth.

Western Rift (Albertine Rift)
 The snowy Rwenzori Mountains, the volcanic Virunga chain, and other ranges—all born during the rift's creation—contribute to high rainfall, which keeps freshwater flowing into the Great Lakes. Intense farming and ethnic and political conflict have stressed this rift's resources and renowned wildlife. To the south, another rift holds 2,300-foot-deep Lake Malawi. No other lake in the world has more species of fish—over 800, most found only here.

Human Population
 Most residents of the Great Rift Valley are subsistence farmers, herders, and fisherman. The largest urban area is Kenya's capital, Nairobi, the commercial hub of East Africa, with more than three million people. High population density in the Ethiopian Highlands and along the Albertine Rift reflects large families surviving on small plots of fertile land.

