Figure 36. The island of Hawaii is formed by five volcanoes; Kohala, Mauna Kea, Hualalai, Mauna Loa, and Kilauea. Volcanic rocks that form the core of the island of Hawaii include the Ninole and Hilina Basalts, and the Ka Lae and Kahuku Formations. Extensive zones of vents and dikes exist on all of the volcanoes.

The island of Maui is formed by two volcanoes, the older West Maui volcano and the younger East Maui volcano. The East Maui volcano, which forms the eastern two-thirds of the island, last erupted about 1,000 years ago. The West Maui volcano, the Wailuku Basalt beneath the isthmus that separates the two volcanoes, and the Lahaina Basalt, which is exposed in sea cliffs on the Honolua-ono Basalt, Olivine-poor Tholeiite in the rift zones of the West and East Maui volcanoes, and the Honolua-ono Basalt, which crops out on the isthmus between the two volcanoes.

Kahoolawe consists of a single volcano. A single rift zone, the Kealaikahiki Formation, forms most of Kahoolawe. The volcano contains a prominent rift zone in its southern half.

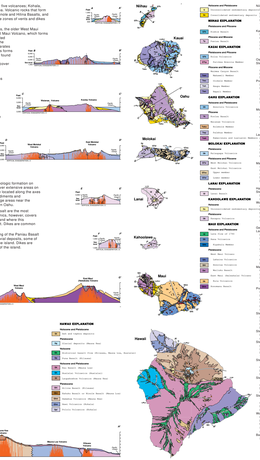
Lanai consists of a single volcano and the Lanai Formation, which forms most of the island. Sedimentary deposits fill several basins in the interior of the island.

The island of Molokai is formed by two volcanoes, the older West Molokai volcano and the East Molokai volcano. The West Molokai volcano, which forms most of the island, is made up of the Kaluakoi Basalt, but contains a prominent rift zone in the island's western part, but contains a prominent rift zone in the island's western part. The East Molokai volcano, which forms most of the island, is made up of the Olivine-poor Tholeiite and the Olivine-rich Tholeiite members of the Kalaupapa Formation. The upper member of the East Molokai Volcanics is thin in most places, but a prominent rift zone complex is located in east Molokai. A plain covered with alluvium and lagoonal deposits separates the two volcanoes.

The Koolau Basalt is the most widespread geologic formation on Oahu and forms the core of the island. Dike complexes are located along the island's western part. Dike complexes are located along the axes of both volcanoes. Unconsolidated clastic sediments and carbonate rocks form a veneer on the island's south and west shoreline, particularly in southern and western Oahu.

The four members of the Waimea Canyon Basalt are the most widespread geologic units on Kauai. The Olivine-rich Member occupies extensive areas on the eastern half of the island where the Olivine-poor Member of the Waimea Canyon Basalt. Dikes are common throughout much of the island.

Niihau is formed by a single volcano consisting of the Panioa Basalt and the overlying younger Kaena Basalt. Alluvial deposits, some of which are lagoonal, form a veneer on the island. Dikes are common in a rift zone along the eastern half of the island.


Ka Lae
Kahuku
Mauna Loa
Kilauea
Hualalai
Mauna Kea
Ninole
Hilina
Kaena
Waimea Canyon
Koolau
Wailuku
Lahaina
Honolua-ono
Olivine-poor Tholeiite
Olivine-rich Tholeiite
Kaluakoi
Kealaikahiki
Lanai
Kahoolawe
Haleakala
Hana
Kaupo
Niihau
Kauai
Oahu
Molokai
Lanai
Kahoolawe
Maui
Hawaii
Sea level
Vertical scale of sections
Scale of maps
Mauna Loa
Kilauea
Mauna Loa Volcanics
Kilauea Volcanics
Volcanic rocks
Volcanic and sedimentary rocks
Sedimentary rocks
Volcanic rocks
Sedimentary rocks
Volcanic rocks
Sedimentary rocks
Volcanic