

## **Darwin's Arch, Darwin Island, Galápagos Archipelago, Ecuador.**

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**Darwin's Arch, Darwin Island, Galápagos Archipelago, Ecuador.** Darwin Island, also known as Isla Darwin, is among the smallest islands in the Galápagos Archipelago, with an area of around 2.33 km<sup>2</sup>. Named in honor of the English scientist Charles Darwin, the island is the remains of an extinct volcano that reaches approximately 165 m above sea level. It is situated northwest of the main Galápagos Island group on the Wolf-Darwin Lineament, which extends from the Galápagos Platform to the Galápagos Spreading Center, a mid-ocean ridge separating the Nazca and Cocos tectonic plates. The formation of Darwin Island is different from the formation of the main Galápagos Islands. There are currently two theories on the formation of the Wolf-Darwin Lineament: the first theory postulates that magma rising from the original mantle plume that formed the main Galápagos Islands was channeled towards the Galápagos Spreading Center and formed Darwin Island; alternatively, a second theory states a separate rise in magma caused by stress in the ocean lithosphere by a transform fault allowed for the creation of Darwin Island.

Darwin's Arch is located approximately one kilometer to the southeast of the island and has a bridge-like appearance marking the end of a reef. The reef slope here is a mix of lava and coral that drops to a sand bottom that angles away from the island and the arch. Strong currents sweep over the reef bringing large schools of scalloped hammerhead sharks (*Sphyrna lewini*) here. Schools of barberfish (*Johnrandallia nigrirostris*) and king angelfish (*Holocanthus passer*) congregate above the reef drawing individual hammerheads down from their schools to hover over the reef to be cleaned of parasites and bits of old skin. Other species of sharks are seen here as well, most notably is the whale shark (*Rhincodon typus*), the largest known extant fish species in the ocean. In addition, many bird species, such as the juvenile red-footed boobies (*Sula sula*) shown in the image, use this area for both breeding and nesting grounds. (Photograph taken May 2019 by Chris Makowski, Coastal Education and Research Foundation (CERF-JCR), Coconut Creek, Florida, U.S.A.)