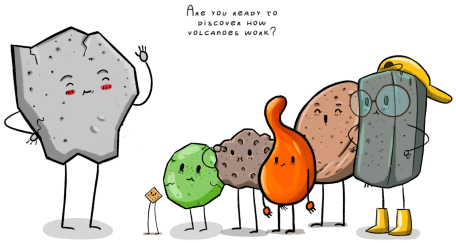


VOLKIBLOG

HISTORICAL ERUPTIONS IN THE CANARY ISLANDS

Before we begin discussing the **historical eruptions** in the Canary Islands, let us briefly review what this concept means. A historical eruption is one that has been documented in writing. In the Canary Islands, the historical period began 500 years ago with the conquest of the archipelago. From then on, written records were kept of all the events that occurred in this region. Therefore, any eruption that has occurred in the Canary Islands over the past 500 years is considered historical.

In this time period, the Canary Islands have witnessed 14 historical volcanic eruptions: 7 in La Palma, 4 in Tenerife, 2 in Lanzarote, and 1 in El Hierro. Join us to discover what these eruptions were like!

When we talk about volcanic eruptions, one of the first questions that arises is: how long did they last? Well, the historical eruptions in the Canary Islands lasted from 10 days to just under 5 months. However, the Timanfaya eruption in Lanzarote far exceeds all the others because... it lasted 6 years! That is right, from 1730 to 1736.

Generally, these eruptions began with the opening of multiple vents along an eruptive fissure, where explosive activity (strombolian) dominated and was responsible for shaping the volcanic cones that are so characteristic of the Canary landscape (Figure 1a). After this initial phase, effusive activity followed with the emission of lava flows that, in some cases, formed extensive lava fields depending on the volume of magma emitted and the characteristics of the terrain (Figure 1b).

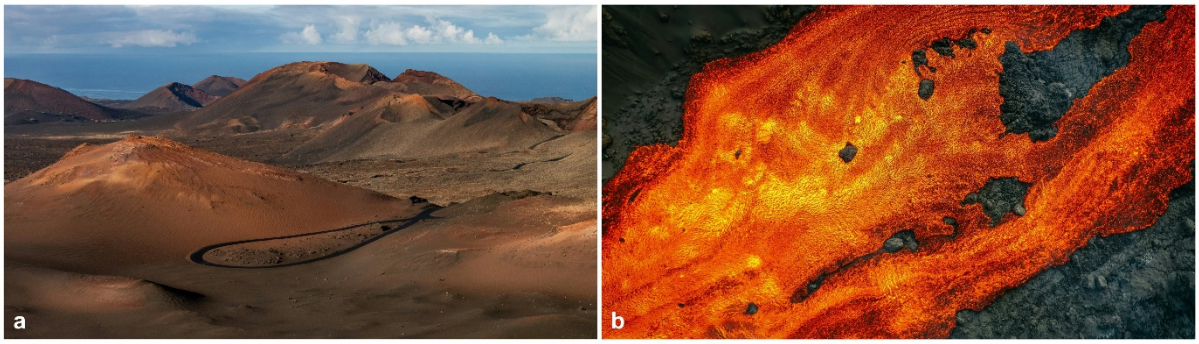
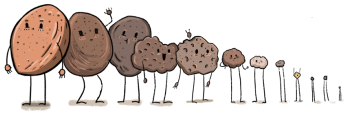
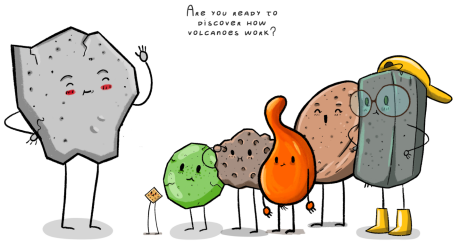


Figure 1. a. General view of Timanfaya National Park in Lanzarote; https://unsplash.com/. b. Lava flows emitted during the 2021 eruption in La Palma; https://unsplash.com/.





But as could not be otherwise, there are always exceptions... The eruptions of Tenerife in 1704-1705, Lanzarote in 1824, and La Palma in 1949 had a much more complex evolution. In each of them, multiple vents opened, separated by several kilometres. Therefore, we must keep in mind that more than one volcano can form during the same eruption.

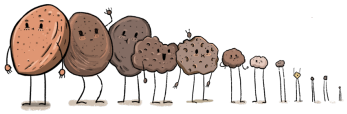
Now that we know that not all eruptions are the same, let us look at two other cases that stand out for their duration and impact, as well as for their place of emission.

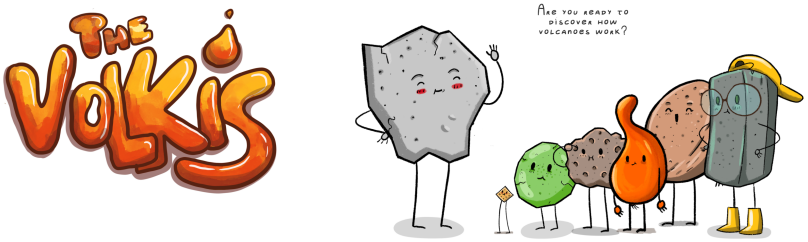
In the historical volcanism of the Canary Islands, the Timanfaya eruption in Lanzarote (1730-1736) is highly unusual in terms of duration and impact on society. The lava covered about 146 km^2, which is equivalent to around 20,000 football fields, destroying 26 villages and forcing a significant portion of the inhabitants of Lanzarote to abandon their land.

The Tagoro eruption in El Hierro (2011-2012) generated great scientific and media interest, as it was... a submarine eruption! Yes, yes, the only historical submarine eruption in the Canary Islands (Figure 2). For this reason, we do not see traces of this eruption on the surface, but rather on the seabed, where significant changes in the ecosystems also occurred.

Figure 2. Effects on the surface of the Atlantic Ocean caused by the submarine eruption of the Tagoro Volcano, about 2 km south of La Restinga, on the island of El Hierro. Photograph taken from a helicopter flight conducted by the Instituto Geográfico Nacional (IGN) and the Guardia Civil on 4 November 2011.

As a final point in this blog about the historical eruptions in the Canary Islands, it is important to highlight that the time between the end of one eruption and the onset of another is not always the same. An example of this are the three eruptions that occurred in less than 10 years, between 1704 and 1712. On the opposite end, we have the case of the eruption that took place after 85 years of 'calm', between 1824 and 1909. Does this mean that the next eruption will occur, at most, in 85 years? Well, it is not that simple. Despite advances in volcanology, scientists cannot predict with certainty when the next eruption in the Canary Islands will take place. After all, volcanic eruptions are like people, all of them unique.





In the following table, you will find a summary of some of the most relevant characteristics for each historical eruption in the Canary Islands.

Year	Island	Eruption	Date onset-end	Duration (days)
1585	La Palma	Jedey/Tajuya	19 May – 10 August	84
1646	La Palma	Martín/Tigalate	1 October – 21 December	82
1677-1678	La Palma	Fuencaliente	17 November – 21 January	66
1704-1705	Tenerife	Siete Fuentes	31 December – 5 January	66
		Fasnia	5-15 January	10
		Arafo	2 February – 27 March	53
1706	Tenerife	Garachico	5 May – 13 June	39
1712	La Palma	El Charco	9 October – 3 December	56
1730-1736	Lanzarote	Timanfaya	1 September 1730 – 2 April 1736	2041
1798	Tenerife	Chahorra	9 June – 15 September	99
1824	Lanzarote	Tao	31 July – 1 August	2
		Nuevo del Fuego	29 September – 5 October	7
		Tinguatón	16-24 October	9
1909	Tenerife	Chinyero	18-27 November	9
1949	La Palma	San Juan	24 June – 30 July	37
1971	La Palma	Teneguía	26 October – 18 November	24
2011-2012	El Hierro	Tagoro	10 October – 15 February	129
2021	La Palma	Tajogaite	19 September – 13 December	85

Note: – *Only those historical eruptions whose events have been confirmed with dates and locations have been considered* –

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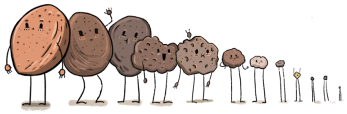

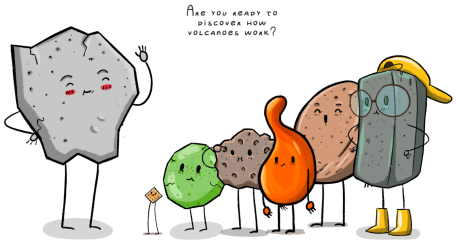

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