



VOLCANIC SHOW CAVES

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Abstract

More than 100 show caves of volcanic origin are currently identified throughout the world, in Iceland, Azores (Graciosa, Pico, Terceira and São Miguel islands), Madeira, Canary Islands (Fuerteventura, Lanzarote, La Palma and Tenerife islands), Galapagos, Samoa (Savaii and Upolu islands). New Zealand, Hawaii (Kauai, Maui and Hawaii islands), Mauritius, Reunion, Kenya, Rwanda, Uganda, Zaire, Mexico, U.S.A. (California, Idaho, New Mexico, Oregon and Washington states), Korea, Japan, Australia, and Italy. The present list undoubtedly is incomplete. To qualify, a volcanic cave must be sufficiently celebrated that more than a few persons seek it out. Littoral and other erosional or solutional caves in volcanic rocks (Fingal's Cave, Kitum Cave, etc.) are not included. Three categories are identifiable: developed, semi-developed, and self-guided. More than half the known examples are essentially undeveloped caves in national forests and national monuments in the western United States.

Introduction

Not including caves of littoral or other erosional or solutional origin like Fingal's Cave and Kitum Cave, more than 100 show caves are currently known in volcanic rocks throughout the world. The present list undoubtedly is incomplete, and additions and corrections will be welcomed. To qualify, a volcanic cave must be sufficiently celebrated as an attraction that more than a few persons seek it out. Because of persistent gaps in world knowledge of volcanic caves, postcards and advertising leaflets provide the only current information on some caves.

List of volcanic show caves

OCEANIC ISLANDS - ATLANTIC

Iceland: Surtshellir, Raufarholshellir, Blafjoll Cave, Amarker Cave, Grotagja

Azores: *Graciosa:* Furna do Enofre

Pico: Furna dos Montanheiros, Furna das Torres caves, Furna Frei Matias.

Terceira: Algar do Carvão, Gruta do Natal, Gruta das Agulhas, Furna Agua

São Miguel: Gruta do Carvão (in preparation)

Madeira: Ribeira Grande Cave (São Vicente Cave)

Canary Islands: *Fuerteventura:* Cueva del Llano (in preparation)

Lanzarote: Cueva de Los Verdes, Jameo del Agua.

La Palma: Cueva de Todoque (in preparation)

Tenerife: Cueva del Sobrado (in preparation)

OCEANIC ISLANDS - PACIFIC

Galapagos: Bella Vista Cave



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Samoa: *Savaii Island:* Peapea Cave, possibly Aopo Cave.

Upolu Island: possibly Peapea Cave, Senoa Cave, Falemauga Cave.

New Zealand: Ruatapu Cave, Orakei Korako

Hawaii: *Kauai Island:* Blind Eye Spider Cave, Wet and Dry Caves near Haena.

Maui Island: KaEleku Cavern, Hana.

Hawaii Island: Thurston Lava Tube, Kula Kai Caverns, Kaumana Cave, Kazumura Cave (short section), "Lava Tube" (south of Captain Cook), Cockscomb Cave (Puapoo Cave, Fence Cave).

Molokai Island: Old Ladies Cave.

OCEANIC ISLANDS - INDIAN OCEAN

Mauritius: Pont Bondieu Cave

Reunion: (show cave in preparation)

CONTINENTAL

Africa: *Kenya:* Shetani Cave. Mathioni Cave now closed.

Rwanda: Ubuvomo bwa Musanze (status uncertain)

Uganda: Garama Cave (status uncertain)

Zaire: unnamed cave, Virunga (status uncertain)

Americas: *Mexico:* Cueva del Baile, S.L.P., La Gruta and other Teotihuacan caves (may be artificial)

Mainland U.S.A.: Arizona: Lava River Cave (Government Cave), Slate Lakes Cave. Sunset Crater Ice Cave now closed.

California: Balcony Cave, Barnum Cave (Shastina Cave), Big Painted Cave, Blue Grotto, Boulevard Cave, Captain Jack's Cave, Catacombs, Golden Dome Cave, Harris Mtn. Cave, Hercules Leg Cave, Hopkins Chocolate Cave, Indian Well, Inskip Caves, Jot Dean Ice Caves, Juniper Cave, Labyrinth, Lava Brook Cave, Mammoth Cave, Mayfield Ice Cave, Merrill Ice Cave, Mushpot Cave, Ovis Bridge, Pluto's Cave, Sentinel Ice Cave, Skull Cave, Subway Cave, Sunshine Cave, Thunderbolt Cave, Valentine Cave.

Idaho: Beauty Cave, Boy Scout Cave, Crystal Falls Cave, Dead Horse Cave, Dewdrop Cave, Higby Cave, Indian Tunnel, Kuna Cave, Mammoth Cave of Idaho, Shoshone Indian Ice Cave, Surprise Cave, Teakettle Cave. Crystal Ice Cave now closed.

New Mexico: Bat Cave (status uncertain), Big Skylight Cave, Braided Cave, Classic Cave, Four Windows Cave, Ice Cave, (Perpetual Ice Cave), Junction Cave.

Oregon: Arnold Ice Cave System, Lavacicle Cave, Lava River Cave, Malheur Cave, Skeleton Cave, South Ice Cave.

Washington: Ape Cave, Falls Creek Cave, Ice Cave (Trout Lake)

Asia: *Korea:* Manjang Cave, Hallim Park Caves.



Japan: Mt. Fuji (Yamanashi Pref.): Fuji Ice Cave, Narusawa Ice Cave, Narusawa Bat Cave (Narusawa Koumori ana #1), Narusawa Koumori ana # 2-4, Fugaku Wind Cave, Saiko Bat Cave.

Mt. Fuji (Shizuoka Pref.): Hita Ana, Sekotsuji Wind Cave.

Daikon-Jima (Shimane Pref.): Yuki dou.

Fukue-Jima (Nagasaki Pref.): Sakishimazunoi ana, Torinukei ana, Toshi ana.

Mt. Aso (Kumamoto Pref.): Konezuka Wind Cave.

Hyate town (Kagoshima Pref.): Kumaso ana.

Takarabe town (Kagoshima Pref.): Mizonokuchi ana.

Australia: Bya duk Caves, Mt. Eccles Caves, Undara Caves.

Europe: Italy: Alum Cave (Vulcano Island), Grotta del Gelo (Mt. Etna).

Categories

Three categories are reasonably well demarcated among these show caves:

- 1) *developed*, with touristic modifications such as electric lighting, walkways and stairs, advertising and souvenirs. Guides usually are required and fees usually charged. Cueva de Los Verdes in Lanzarote, and Thurston Lava Tube in Hawaii are notable examples. The latter is the most visited volcanic cave of the world.
- 2) *semi-developed*, with controlled access, guides, and minimal modifications such as trails and occasional handrails. Peapea Cave, Savaii Island, Samoa is an example. KaEleku Cavern, Hawaii, and possibly other ecotourism caves are in an interface between this category and Category 1.
- 3) *self-guided*, with few if any modifications of the cave. Rua-tapu Cave, New Zealand and Trout Lake Ice Cave, WA, USA are examples.

Discussion

The majority of volcanic show caves are Category 3. Most of these are in national monuments and national forests in the western United States.

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