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**СРАВНИТЕЛЬНАЯ ХАРАКТЕРИСТИКА САМЫХ ИЗВЕСТНЫХ
ВОДОПАДОВ В МИРЕ
THE MOST FAMOUS WATERFALLS IN THE WORLD**

АННОТАЦИЯ. В статье рассматриваются пять наиболее известных водопадов в мире. Описывается их местоположение, климатические особенности. Приводятся основные характеристики. Выделяются национальные парки вблизи этих водопадов.

ABSTRACT. The paper discusses the five most famous waterfalls in the world. It describes the location, climatic features. Main characteristics of national parks near these waterfalls are given.

КЛЮЧЕВЫЕ СЛОВА: водопад, климат, национальный парк.

KEY WORDS: waterfall, climate, national park.

The paper considers five the most famous waterfalls in different parts of the world, we are going to describe various features and peculiarities of the falls, taking

into account geographical destination. First we take **Iguazu Falls**. Iguazu Falls, Iguazu Falls, Iguassu Falls, or Iguaçu Falls are waterfalls of the Iguazu River on the border of the Argentine province of Misiones and the Brazilian state of Parana. The falls divide the river into the upper and lower Iguazu. The Iguazu River rises near the city of Curitiba. For most of its course, the river flows through Brazil, however, most of the falls are on the Argentine side. Below its confluence with the San Antonio River, the Iguazu River forms the boundary between Argentina and Brazil. The name "Iguazu" comes from the Guarani or Tupi words, meaning "water", and "ûasu", meaning "big". Legend has it that a deity planned to marry a beautiful woman named Naipi, who fled with her mortal lover Taroba in a canoe. In a rage, the deity sliced the river, creating the waterfalls and condemning the lovers to an eternal fall. The first European to record the existence of the falls was the Spanish conquistador Alvar Nuñez Cabeza de Vaca in 1541.

Iguazu Falls are located where the Iguazu River tumbles over the edge of the Parana Plateau, 23 kilometres (14 mi) upriver from the Iguazu's confluence with the Parana River. Numerous islands along the 2.7-kilometre-long (1.7 mi) edge divide the falls into many separate waterfalls and cataracts, varying between 60 to 82 metres (197 to 269 ft) high. The number of these smaller waterfalls fluctuates from 150 to 300, depending on the water level. Approximately half of the river's flow falls into a long and narrow chasm called the Devil's Throat. The Devil's Throat is U-shaped, 82 metres high, 150 m wide, and 700 m long (269×492×2,297 ft). About 900 metres (2,950 ft) of the 2.7-kilometre (1.7 mi) length does not have water flowing over it. The edge of the basalt cap recedes by 3 mm (0.1 in) per year. The water of the lower Iguazu collects in a canyon that drains into the Parana River, a short distance downstream from the Itaipu Dam. The junction of the water flows marks the border between Brazil, Argentina, and Paraguay. There are points in the cities of Fozdo Iguaçu, Brazil, Puerto Iguazu, Argentina, and Ciudad del Este, Paraguay, which have access to the Iguazu River, where the borders of all three nations may be seen, a popular tourist attraction for visitors to the three cities.



The Iguazu Falls are arranged in a way that resembles a reversed letter "J". The border between Brazil and Argentina runs through the Devil's Throat. On the right bank is the Brazilian territory, which has just over 20% of the jumps of these falls, and the left side jumps are Argentine, which make up almost 80% of the falls. The falls may be reached from two main towns, with one on either side of the falls: Puerto Iguazú in Argentina and Foz do Iguaçu in Brazil, as well as from Ciudad del Este, Paraguay, on the other side of the Paraná river from Foz do Iguaçu. The falls are shared by the Iguazu National Park (Argentina) and Iguaçu National Park (Brazil). The two parks were designated UNESCO World Heritage Sites in 1984 and 1987, respectively. The first proposal for a Brazilian national park aimed at providing a pristine environment to "future generations", just as "it had been created by God" and endowed with "all possible preservation, from the beautiful to the sublime, from the picturesque to the awesome" and "an unmatched flora" located in the "magnificent Iguaçu waterfalls". These were the words used by Andre Rebouças, an engineer, in his book "Provinces of Parana, Railways to Mato Grosso and Bolivia", which started up the campaign aimed at preserving the Iguaçu Falls in 1876. At this time, Yellowstone National Park in the U.S., the first national park in the world, was four years old.

Iguazu Falls experiences a humid subtropical climate with abundant precipitation and high temperatures year-round. During the summer of 2006, a severe drought caused the Iguazu River to become diminished, reducing the amount of water flowing over the falls to 300 cubic metres per second (11,000 cu ft/s) until early December. This was unusual, as dry periods normally last only a few weeks. The

animals of the parks includes several endangered species: jaguar, jaguarundi, tapir, ocelot, tigris, anteater, pumas de monte, the jungle eagle, and the Yacare Caiman. One can also find birds like the vireo de cascada and large toucans; mammals like the coatí, and a diversity of butterflies. The wine-colored-breasted parrot, named for its wine-colored plumage, also makes this area its home. The Iguazú River joins the Paraná River 23 kilometers (14.5 miles) beyond the falls, after 1,320 km (820) course. Inside the park it becomes up to 1,500 m (4,922 feet) wide and turns first south, then north, forming a large U-shape. Its banks are densely populated by trees, including the ceibo (Cockspur coral tree), whose flower is Argentina's national flower. The plants within the area include lapacho negro and lapacho amarillo (family Bignoniaceae), as well as palmito trees and the 40-meter-high palorosa (family Apocynaceae).

Niagara Falls is the collective name for three waterfalls that straddle the international border between Canada and the United States; more specifically, between the province of Ontario and the state of New York. They form the southern end of the Niagara Gorge. From largest to smallest, the three waterfalls are the Horseshoe Falls, the American Falls and the Bridal Veil Falls. The Horseshoe Falls lie mostly on the Canadian side and the American Falls entirely on the American side, separated by Goat Island. The smaller Bridal Veil Falls are also located on the American side, separated from the other waterfalls by Luna Island.



Located on the Niagara River, which drains Lake Erie into Lake Ontario, the combined falls form the highest flow rate of any waterfall in the world, with a

vertical drop of more than 165 feet (50 m). Horseshoe Falls is the most powerful waterfall in North America, as measured by vertical height and also by flow rate. The falls are located 17 miles (27 km) north-northwest of Buffalo, New York and 75 miles (121 km) south-southeast of Toronto, between the twin cities of Niagara Falls, Ontario, and Niagara Falls, New York.

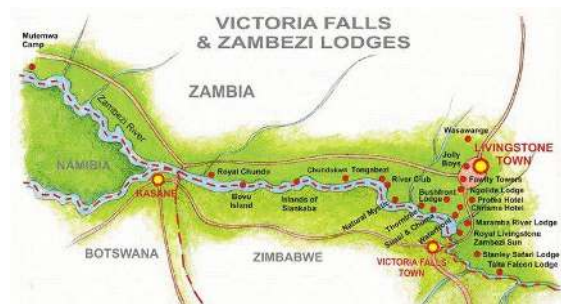
Peak visitor traffic occurs in the summertime, when Niagara Falls are both a daytime and evening attraction. From the Canadian side, floodlights illuminate both sides of the falls for several hours after dark (until midnight). The number of visitors in 2007 was expected to total 20 million and by 2009, the annual rate was expected to top 28 million tourists. The oldest and best known tourist attraction at Niagara Falls is the Maid of the Mist boat cruise, named for an ancient Ongiara Indian mythical character, which has carried passengers into the rapids immediately below the falls since 1846. Cruise boats operate from boat docks on both sides of the falls.

From the U.S. side, the American Falls can be viewed from walkways along Prospect Point Park, which also features the Prospect Point Park observation tower and a boat dock for the Maid of the Mist. Goat Island offers more views of the falls and is accessible by foot and automobile traffic by bridge above the American Falls. From Goat Island, the Cave of the Winds is accessible by elevator and leads hikers to a point beneath Bridal Veil Falls. Also on Goat Island are the Three Sisters Islands, the Power Portal where a huge statue of Nikola Tesla can be seen, and a walking path that enables views of the rapids, the Niagara River, the gorge, and all of the falls. Most of these attractions lie within the Niagara Falls State Park.

On the Canadian side, Queen Victoria Park features manicured gardens, platforms offering views of both the American and Horseshoe Falls, and underground walkways leading into observation rooms that yield the illusion of being within the falling waters. The observation deck of the nearby Skylon Tower offers the highest view of the falls, and in the opposite direction gives views as far as Toronto. Along with the Minolta Tower (formerly the Seagrams Tower and the Konica Minolta Tower, now called the Tower Hotel), it is one of two towers in Canada with a view of the falls. Niagara is really a nice place for travelling. This is because Niagara Falls

and the nearby area is the place that is exposed to a big variety of weather. All the 4 seasons can be seen in Niagara Falls because the area is almost the same the distance from the equator as is the city of Boston. Therefore, Niagara Falls include cold winters, and balmy springs and pretty warm summers.

Victoria Falls presents a spectacular sight of awe-inspiring beauty and grandeur on the Zambezi River, forming the border between Zambia and Zimbabwe. It was described by the Kololo tribe living in the area in the 1800's as 'Mosi-oa-Tunya' – 'The Smoke that Thunders'. In more modern terms **Victoria Falls** is known as the greatest curtain of falling water in the world. Columns of spray can be seen from miles away as, at the height of the rainy season, more than five hundred million cubic meters of water per minute plummet over the edge, over a width of nearly two kilometers, into a gorge over one hundred meters below.



While it is neither the highest nor the widest waterfall in the world, it is classified as the largest, based on its width of 1,708 metres (5,604 ft) and height of 108 metres (354 ft), resulting in the world's largest sheet of falling water. Victoria Falls is roughly twice the height of North America's Niagara Falls and well over twice the width of its Horseshoe Falls. In height and width Victoria Falls is rivalled only by Argentina and Brazil's Iguazu Falls. See table for comparisons. There are two islands on the crest of the falls that are large enough to divide the curtain of water even at full flood: Boaruka Island (or Cataract Island) near the western bank, and Livingstone Island near the middle—the point from which Livingstone first viewed the falls. At less than full flood, additional islets divide the curtain of water into separate parallel streams. The main streams are named, in order from Zimbabwe

(west) to Zambia (east): Devil's Cataract (called Leaping Water by some), Main Falls, Rainbow Falls (the highest) and the Eastern Cataract. The entire volume of the Zambezi River pours through the First Gorge's 110-meter-wide (360 ft) exit for a distance of about 150 meters (500 ft), then enters a zigzagging series of gorges designated by the order in which the river reaches them. Water entering the Second Gorge makes a sharp right turn and has carved out a deep pool there called the Boiling Pot. Reached via a steep footpath from the Zambian side, it is about 150 metres (500 ft) across. Its surface is smooth at low water, but at high water is marked by enormous, slow swirls and heavy boiling turbulence. Objects—and humans—that are swept over the falls, including the occasional hippo or crocodile, are frequently found swirling about here or washed up at the north-east end of the Second Gorge. This is where the bodies of Mrs Moss and Mr Orchard, mutilated by crocodiles, were found in 1910 after two canoes were capsized by a hippo at Long Island above the falls. The principal gorges:

- First Gorge: the one the river falls into at Victoria Falls
- Second Gorge: (spanned by the Victoria Falls Bridge), 250 m south of falls, 2.15 km long (270 yd south, 2350 yd long)
- Third Gorge: 600 m south, 1.95 km long (650 yd south, 2100 yd long), containing the Victoria Falls Power Station.
- Fourth Gorge: 1.15 km south, 2.25 km long (1256 yd south, 2460 yd long)
- Fifth Gorge: 2.55 km south, 3.2 km long (1.5 mi south, 2 mi (3.2 km) long)
- Songwe Gorge: 5.3 km south, 3.3 km long, (3.3 mi south, 2 mi (3.2 km) long) named after the small Songwe River coming from the north-east, and the deepest at 140 m (460 ft), the level of the river in them varies by up to 20 meters (65 ft) between wet and dry seasons.

A famous feature is the naturally formed "Armchair" (now sometimes called "Devil's Pool"), near the edge of the falls on Livingstone Island on the Zambian side.

When the river flow is at a certain level, usually between September and December, a rock barrier forms an eddy with minimal current, allowing adventurous swimmers to splash around in relative safety a few feet from the point where the water cascades over the falls. The two national parks at the falls are relatively small—Mosi-oa-Tunya National Park is 66 square kilometres (16,309 acres) and Victoria Falls National Park is 23 square kilometres (5,683 acres). However, next to the latter on the southern bank is the Zambezi National Park, extending 40 kilometres (25 mi) west along the river. Animals can move between the two Zimbabwean parks and can also reach Matetsi Safari Area, Kazuma Pan National Park and Hwange National Park to the south. On the Zambian side, fences and the outskirts of Livingstone tend to confine most animals to the Mosi-oa-Tunya National Park. In addition fences put up by lodges in response to crime restrict animal movement.

Mopane woodland savannah predominates in the area, with smaller areas of miombo and Rhodesian teak woodland and scrubland savannah. Riverine forest with palm trees lines the banks and islands above the falls. The most notable aspect of the area's vegetation though is the rainforest nurtured by the spray from the falls, containing plants rare for the area such as pod mahogany, ebony, ivory palm, wild date palm and a number of creepers and lianas. Vegetation has suffered in recent droughts, and so have the animals that depend on it, particularly antelope. The national parks contain abundant wildlife including sizable populations of elephant, buffalo, giraffe, Grant's zebra, and a variety of antelope. Katanga lions, African leopards and South African cheetahs are only occasionally seen. Vervet monkeys and baboons are common. The river above the falls contains large populations of hippopotamus and crocodile. African bush elephants cross the river in the dry season at particular crossing points. Klipspringers, honey badgers, lizards and clawless otters can be glimpsed in the gorges, but they are mainly known for 35 species of raptors. The Taita falcon, black eagle, peregrine falcon and augur buzzard breed there. Above the falls, herons, fish eagles and numerous kinds of waterfowl are common.

Angel Falls is a waterfall in Venezuela. It is the world's highest uninterrupted waterfall, with a height of 979 metres (3,212 ft) and a plunge of 807 metres (2,648 ft). The waterfall drops over the edge of the Auyantepui mountain in the Canaima National Park, a UNESCO World Heritage site in the Gran Sabana region of Bolívar State. The height figure 979 metres (3,212 ft) mostly consists of the main plunge but also includes about 400 metres (0.25 mi) of sloped cascades and rapids below the drop and a 30-metre (98 ft) high plunge downstream of the talus rapids. The falls are on the Orinco River (alternatively known as the Kerep River or Kerepacupai), which flows into the Churun River, a tributary of the Carrao River. The waterfall has been known as the "Angel Falls" since the Mid-20th century; they are named after Jimmie Angel, a US aviator, who was the first person to fly over the falls. Angel's ashes were scattered over the falls on 2 July 1960.



Angel Falls is one of Venezuela's top tourist attractions, though a trip to the falls is a complicated affair. The falls are located in an isolated jungle. A flight from Puerto Ordaz or Ciudad Bolívar is required to reach Canaima camp, the starting point for river trips to the base of the falls. River trips generally take place from June to December, when the rivers are deep enough for the used by the Pemon guides. During the dry season (December to March) there is less water seen than in the other months.

There is an incredible variety of tropical wildlife in the area, including monkeys, poison arrow frogs, and hundreds of species of orchids. Aside from the

monkeys, mammals in the area are generally difficult to spot but include giant anteaters, armadillos, porcupines, three-toed sloths, otters, jaguars, pumas, tapirs, and capybaras.

Sutherland Falls is a high volume waterfall of three steps in very quick succession along the Arthur River, which spills from a pair of sizable lakes carved into glacial basins high on a mountainside in New Zealand's Fiordland National Park. The three drops of the falls stand 751 feet, 815 feet, and 338 feet tall respectively, occur in such quick succession that when viewed from the air the falls appear to be one long drop that impacts the bedrock in a few places. The Arthur River heads in a modest glacier which feeds into a small unnamed lake which then spills into Lake Quill in its own waterfall (see Lake Quill Falls). Because of the volume of precipitation the region receives, the glacier sustains its mass fairly well and the lakes always provide a consistent flow over the falls and thus remain very consistent all year long.

Sutherland Falls is the Official name of this waterfall. Sutherland Falls named for Donald Sutherland, a prospector who found the falls in 1880. William Quill, whom the lake feeding the falls was named for, is thought to be responsible for the first measurement of the falls which was attained by actually scaling the headwall next to the waterfall. New Zealand is a country which has a very high concentration of waterfalls. Unfortunately many of the best ones are isolated deep in the backcountry and are extremely difficult to access. We are fortunate then that the absolute best waterfall in the country is easily accessed via a very popular trail system but can also be seen easily from the air thanks to the flourishing tourism industry in the area. If you are visiting the South Island of New Zealand, Sutherland Falls should be at the very top of your list of waterfalls to see.

Comparing the waterfalls mentioned above we can compose the following table:

	Iguazu falls	Niagara	Victoria	Angel Falls	Sutherland
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		Falls	Falls		Falls
height	82 m	53 m	120 m	979 m	580 m
width	2,7 km	792 m	1,8 km	107 m	-
country	Brazil Argentina	USA	Zambia Zimbabwe	Venezuela	New Zealand
river	Iguazu	Niagara	Zambezi	Turun	Arthur

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