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# J. Ray NEWS

AN OFFICIAL PUBLICATION OF J. RAY McDERMOTT, S.A.

Special Focus

## Bright Ideas

Innovation sparks change and improvement

## Great DEPTHS

Diving division blends man, nature and technology

## Brazil: Carnival of life

Exotic beauty, extensive resources, exuberant culture and engaging people





# Brazil:

*Carnival of life*

*Exotic beauty, extensive resources, exuberant culture  
and engaging people reflect the essence of Brazil.*





“Brazil is the discovered Earthly Paradise, where the biggest rivers originate and run, where the healthiest climate predominates, where friendly stars exercise their influence and the most tender breezes blow, rendering it fertile and peopled by countless inhabitants.”

- Rocha Pitta, early historian

**E**ven the country’s physical parameters exude life. As the fifth-largest country in South America, Brazil shares common boundaries with every country on the continent, except Chile and Ecuador. Its coastline of more than 4,600 miles, and total area of more than 5.3 million miles spans four time zones, including one for the Fernando de Noronha Islands alone.

#### Natural wealth

Brazil’s landscape is equally expansive and vibrant with a diverse topography including mountains, plains, highland, scrubland, savanna and, of course, the glorious Amazon Rainforest (see page 38).

Renowned for its magnificent beaches, the most famous of which are Rio de Janeiro’s Ipanema and Copacabana.

Among its scenic mountain areas, the most distinct is Rio de Janeiro’s Sugar Loaf Mountain. The highest is Pico da Neblina (Misty Peak), at

9,823 feet, in the Guiana Highlands. Also more than 9,000 feet high are southern Brazil’s Pico da Bandeira and Pico do Cristal.

Brazil has a dense and complex system of rivers, dominated by the mighty Amazon, ranked the largest and second-longest river in the world. A major tributary of another river (Parana) is home to the Iguazu Falls which flow south between Argentina and Uruguay. This breathtaking landmark consists of 275 falls, most about 210 feet in height, with individual falls reaching up almost 300 feet. Wilderness areas include the wildlife-rich wetlands of Pantanal, canyons and caves of Chapada Diamantina and Mata Atlantica running much of the length of Brazil’s coastline, as well as the world’s biggest rainforest.

#### Historical diversity

Brazil has a long and rich history, with evidence suggesting possible human habitation more than 30,000 years ago. Discovered artifacts, including cave paintings, date back at least 11,000 years.

Portuguese explorers arrived in 1500 and claimed it as a colony. The name Brazil is thought to derive from the Portuguese word for the red-colored brazilwood the early visitors gathered; *brasa* means glowing coal.

The indigenous people taught the explorers about the cultivation of corn, the construction of hammocks and the use of dugout canoes. The first permanent settlement was made in 1532.

As a Portuguese colony – regaining its independence in 1822 – Brazil was established as a plantation-based economy, initially sugarcane. The discovery of gold in the 1690s prompted the first significant settlement of the interior. When sources of the precious metal were exhausted, coffee plantations dominated the country’s industry.

From the mid-1880s, coffee exporters ruled the political landscape, until populist leader, Getulio Vargas, rose to presidential power in 1930. Vargas held that office several times until 1954. For the next 30 years, Brazil followed a pattern of military rule amid worsening economic crises, followed by a return to civilian rule in 1985.

In 2003, the Brazilian people voted in Luiz Inacio Lula da Silva, a former trade union leader and factory worker, as the country’s first elected working-class head of state. “Lula,” as he is known, has managed to interweave a potent approach of conservative fiscal policies with far-ranging antipoverty programs, which have lifted 36 million people





out of chronic poverty.

Today, the country is officially defined as a Federal Republic, formed by the union of the Federal District, 26 states and 5,564 municipalities.

The people of Brazil are as diverse as its landscape and habitat. Many can trace their roots back to Portuguese colonists, but ancestry also includes Italian, German, other European descent, Amerindian, Asian and African. And there are more Japanese Brazilians in Rio de Janeiro than anywhere else outside Japan.

#### Economic strength

As the world's 10th largest economy and ninth-largest in purchasing power, Brazil's economic might is underscored by large and well-developed sectors in agriculture, mining, manufacturing and services. The industrial sectors make for a formidable economic system, surpassing all of its neighboring countries.

Best known for its agricultural base, which produces coffee, soybeans, wheat, rice, corn, sugarcane, cocoa, citrus and beef, Brazil is expanding to make its economic presence

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Photo credit: Manuel Pereira

## THE SYMBOLS AND EXPERIENCES THAT BEST CHARACTERIZE BRAZIL ARE ITS FESTIVALS.

**Carnival.** The benchmark for all other festivals around the world, Rio's Carnival has a spirit and energy that takes over the city for four days (February 2010). Parading samba schools form continuous streams of color, motion and rhythm.

**National Cachaca Day.** June 12 celebrates the occasion when people protested the Portuguese ruling that prohibited the production of cachaca, the national alcoholic spirit of Brazil.

**June Bonfire Festival.** Against a backdrop of fireworks and bonfires, children and adults give thanks for the rainy season and celebrate rural life in country-style clothing (June 13, 2009 and various dates).

**Bumba Meu Boi.** Often called simply "Festival," the three-day June event (various dates from June 13-29, 2009) celebrates and re-enacts a popular folk tale and other mythology through costume and dance.

**Independence Day.** On September 7 Brazil celebrates its independence, with parades, decorations, flags, fireworks and much excitement and joy.

**National Samba Day.** In true Brazilian style, National Samba Day is one huge, musical party. Started in 1962, the December event is a tribute to all the artists and people involved in making Carnival such an integral part of Brazilian culture.

**Iemanjá Festival.** Every December 31 throngs of revelers congregate on the golden beaches of Copacabana, Ipanema and Leblon to worship the Goddess of the Sea, Iemanjá.





# THE MIGHTY AMAZON

**The beauty, majesty and timelessness of the Amazon Rainforest are unmatched in this world.**

## Paradise found

Sprawling across nine nations, with the majority situated within Brazil, the Amazon Rainforest is 1.4 billion acres of spectacular and awe-inspiring natural resources. Named for its life force, the rainforest is the drainage basin for the 4,080-mile long Amazon River and its more than 1,000 tributaries that empty one-third of the world's fresh water into the sea.

Some 60 million years ago, the Amazon Rainforest was formed when tropical temperatures lowered and the Atlantic Ocean grew wide enough to provide a warm, moist climate within the Amazon basin. Life gathered in isolated patches and evolved over millions of years, creating "the greatest orchestration of life ever heard."

Harmonizing by at least 30 percent of all known species today, the rainforest is the largest and most diverse natural phenomenon on Earth: 40,000 plant varieties, 2.5 million insect species; 3,000 fish and more than 2,000 birds, reptiles, amphibians and mammals, many of which are unique to the area.

One of the most interesting and endearing mammals is the pink dolphin, or "botos." This most intelligent, friendly and sensitive member of the dolphin family is also extremely versatile, as it is able to live in a mix of fresh and salt water. It gets its unique coloring from increased blood flow to the capillaries near the skin's surface.

Not only a masterpiece to see and hear, rainforest flora and fauna contribute a wealth of renewable, natural resources: basic food supplies, clothing, shelter, fuel, spices, industrial raw materials and medicine. About 25 percent of the active ingredients in today's cancer-fighting drugs, for example, come from organisms found only in the rainforest. Of the 3,000 fruits

found in the rainforest only 200 are in use worldwide; indigenous tribes use more than 2,000.

## Orchestrated chaos

While its density and diversity may make it seem chaotic, the rainforest is actually a finely crafted and perfectly balanced ecosystem, synchronized among four interdependent layers.

In the tallest, emergent, layer trees grow up to 200 feet high and have trunks up to 16 feet in diameter. Exposed to all the fluctuating elements, plant leaves are small and covered with a thick waxy surface to hold water.

The main layer, the canopy, filters out about 80 percent of the sunlight. Densely leaved trees, flowers and fruits grow in this layer; epiphytes (organisms that grow on or attach to a living plant) cover every available surface.

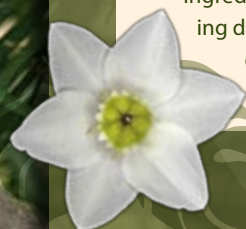
Receiving five percent or less of available sunlight, the understory is inhabited by the largest concentration of insects. Because there is little air movement, plants rely on insects and animals to pollinate their flowers.

Almost no plants grow on the forest floor. Instead, it is covered with a biomass of decomposing vegetation and organisms that are broken down into usable nutrients.

Despite its strength and beauty, the Amazon Rainforest faces a formidable challenge. Deforestation is occurring at a rate that could diminish the rainforest by 40 percent over the next 20 years. To counteract the loss, public and private conservation efforts have greatly increased, with more than 620,000 square miles of the rainforest now protected.

The goal of these ongoing efforts is to preserve the rainforest's majesty and riches for generations to come. <sup>TM</sup>

**More than half (60 percent) of the Amazon rainforest covers Brazil; smaller pieces are in eight other South American countries.**



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felt around the world. Rich in another natural resource, the country has the greatest variety of gemstones on the planet.

With emerging industries in petrochemicals, forestry, textiles, footwear, computers, lumber, iron ore and steel, Brazil is regarded as a serious player on the international industrial stage. The country also manufactures aircraft, motor vehicles and parts, plus a variety of other heavy equipment and machinery.

Public universities and research institutes are responsible for Brazil's boom in technological advances. The government supports more than 73 percent of the funding needed for current research endeavors. Driving the country's advances are Oswaldo Cruz Institute, Butantan Institute, the Air Forces' Aerospace Technical Center, the Brazilian Agricultural Research Corporation and the National Institute for Space Research. As a result, Brazil now has the most progressive space program in all of Latin America, with the capability to launch vehicles and satellites in space and support a satellite-manufacturing sector.

Education is a cornerstone of the country's prosperity and to this end, 25 percent of state and municipal taxes and 18 percent of federal taxes are set aside to pay for educating Brazil's population. Such measures have paid off, as the population's literacy rate soared an impressive 88 percent in 2003, and youth between 15 and 19 years old had more than a 93 percent literacy rate.

The greatest concentration of Brazil's industry and economic vitality can be found in its

major cities. São Paulo, best known as the economic epicenter of Brazil, sustains some of the country's most diversified industrial and service sectors.

In addition to its industry, the vast telecommunications network that Brazil has developed underpins some 1,600 radio and 138 television stations across the country. Fifty million of its residents now claim to be Internet users.

Transportation also marks this modern emerging superpower, with more than 4,000 airports and 18,000 miles of railway. Brazil's infrastructure is so important to its continued economic growth that in 2007, the country developed a four-year plan to spend \$300 billion to modernize its roads, power plants and ports.

A relative latecomer to the oil and gas industry, with major oil fields discovered offshore Rio de Janeiro in 1974 and 1976, Brazil has made up for the delay. In 2001, the country was one of the top 20 producers of crude in the world and today has become a major area for deepwater development.

Assisting in Brazil's offshore development, J. Ray was awarded the engineering, procurement and construction of 7,165 tons of topsides for a floating production, storage and offloading (FPSO) vessel for A.P. Moller-Maersk A/S. The FPSO will ultimately be operated in the Peregrino field located in the prolific Campos Basin about 53 miles offshore Brazil in 328 feet of water.

Engineering and procurement are being handled by J. Ray's Houston offices, and





construction is taking place at the Batam Island, Indonesia facility. Production of estimated recoverable crude of 300-600 million barrels is planned to start in 2010.

#### Cultural vitality

The diversity of its people is also reflected in the culture's rich blend and spirit.

Celebration is an integral part of Brazilian life, from everyday occasions to elaborate year-round festivals (sidebar, page 37). A major part of the celebrations, music is more than entertainment; it is often referred to as the "soundtrack of national life" and frequently is accompanied by dance.

Shaped by musical influences from Portuguese, native Indians and African heritage, distinct styles are the samba, bossa nova and lambada.

Matching this celebratory zeal is the love of football (futebol). Seleção, the country's national football team, is currently ranked fifth in the world, according to the FIFA World Rankings, and has won the World Cup tournament five times.

Another sport with a huge fan following is auto racing, with Brazilian drivers winning the Formula 1 world championship eight times.

Brazil also boasts a long tradition of cinema, which has reached a new international zenith in the past few years. Several celebrations of this art



form include the Sao Paulo International Film Festival and It's All True event; Rio de Janeiro's Anima Mundi, honoring animation, and Festival do Rio BR; and Gramado Film Festival in the city of Gramado.

Rich and varied experiences are possible among Brazilian cities, from the Sao Paulo megatropolis to the labyrinthed, cobblestoned, baroque-styled Ouro Preto.

Known as the "marvelous city," Rio de Janeiro is a spectacular harbor dominated by the famous Sugar Loaf Mountain and Corcovado peak, which rises 2,326 feet high and provides the focal point for the classic Rio skyline.

In the center of Brazil is one of the most original cities in the world and the

country's capital. Brasilia was built in 2,000 days to be the nation's focus of power. Inaugurated in 1960, it is a landmark in city planning and renowned for its futuristic architecture.

Culturally rich Brazil hails many interesting museums and theaters, including the Museum of Modern Art, designed by the world famous architect Oscar Niemeyer. The Municipal Theatre of Rio de Janeiro, built between 1904 and 1909, is a miniature of the Paris Opera.

For those seeking a celebration of life and true adventure, Brazil offers a rich tapestry of uncommon cultures and tantalizing sights and sounds unlike anywhere else in the world. 