

LIVING IN THE MATA ATLANTICA

GREEN MAGIC IN UBATUBA

Endangered and little known beyond its national boundaries,
Brazil's Atlantic Rainforest is one of the world's last ramparts of untouched wilderness

■ The idyllic tropical landscape of Ubatuba's coastline, with ocean and rainforest intermingling continuously to create a unique habitat.

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AND EDELICIO MUSCAT

This is a magical place. As a jaded big city dweller that left everything behind seven years ago to start afresh in Ubatuba, I could easily have been completely out of my element. From concrete skyscrapers and traffic jams to hummingbirds in the living room and pit vipers in the garden is a huge leap! I won't say it is for everyone, but it is certainly working for me. So what is it about this place, then? First of all, the wondrous Atlantic Rainforest. Ubatuba sits on the coast in the northeast corner of the state of São Paulo, Brazil. Of its 711 square kilometers, 83% are in the Serra do Mar State Park – the largest proportion of preserved forest in any county in Brazil. Sadly, while the Atlantic Rainforest is the most biodiverse biome in the planet, it also is, by all accounts, the most threatened. Originally it covered around 15% of Brazil's area, amounting to 1.3 million square kilometers. It extended from the coast up to 2,000 meter-high mountaintops, encompassing diverse ecosystems along the shores of 17 states. Today, only about 7% of that total remains in 13 states, most of it very fragmented. That makes Ubatuba a relevant area of contiguous forest, where animal and plant species, many of them endemic, can still thrive. Truth be told, I barely knew anything about the forest when I moved to Ubatuba.

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The small rivers and streams descending to the Atlantic Ocean from the steep coastal mountain ridges contribute to the unique Mata Atlantica ecosystem.



■ Puruba, one of Ubatuba's many Atlantic beaches, much loved by tourists and locals alike. Below, a male Black-backed Tanager *Tangara peruviana*. This species of south Brazil migrates north during winter, but little is known about its habits (1), a female Black-throated Mango *Anthracothorax nigricollis*. The male of this hummingbird species is missing the black stripe down its throat and abdomen (2), a rare Marmoset *Callithrix aurita* (3) and a baby Marmoset, possibly a cross between *C. aurita* and *C. jacchus* (4).





■ A Swallow-tailed Kite *Elanoides forficatus* swoops over one of Ubatuba's many beaches. This bird graces the skies of the area very occasionally, always in groups – it is one of the rare gregarious raptor species – and it is an agile and very elegant flyer, commonly performing fantastic mid-air acrobatics.

What I did know about were its stunning beaches (80 of them, some busy, others accessible only by boat or trail) and the magnificent scenery comprised of ocean, islands, mountains, lots of green and boulders, certainly one of Brazil's most beautiful coastal stretches. Driving along, there are moments in which stopping just to gape is almost compulsory. Oh, and I also knew it rained. A lot. Locals and tourists alike jokingly call Ubatuba "Ubachuva" – "chuva" in Portuguese means rain. No wonder: the area receives over 2,500 millimeters of yearly rainfall. People may hate the rain because it wrecks their day at the beach (and Brazilians love the beach), but I embrace it because it created this lush, chaotic, sensual, fascinating paradise, where 30-meter high trees, a mind-boggling variety of plants and countless animal species coexist. I have it as my next door neighbor, and more often than not it makes life that much more interesting, albeit sometimes a bit dangerous.

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Steep cliffs and deep ravines where rainforest and seaside meet

Steep rock cliffs swathed in vegetation, sandy beaches and the constant pounding of the oceanic surf are the essential ingredients of the Atlantic Rainforest biotope.





Left, portrait of a White-edged treefrog *Hypsiboas albomarginatus*. Right, a stunning Swallow-tailed Hummingbird *Eupetomena macroura*, one of the most beautiful species to be seen in Ubatuba's Atlantic Rainforest (1) and the colorful inflorescence of an *Aechmea nudicaulis*, a commonly observed bromeliad which is native to the Atlantic Rainforest (2).



1



2



■ *River mouths emptying in the Atlantic Ocean are fringed by thick mangrove woods - an essential habitat for fish fry and juveniles of several marine and terrestrial species.*

Having a Brazilian banana spider throw itself at you, a pit viper sunning atop a rock in the garden, or wasps zooming into your office can stop you dead in your tracks. But I never forget that I am the invader – not the crawling, walking, slithering or flying visitors that occasionally call my home their own. I've learned to live with them just as well as I live with armadillos and teju lizards that drop by, or the charming female Green Honeycreeper that perches on the chair back in the kitchen, vociferously demanding more banana. For a few years I simply enjoyed being here, taking advantage of the clean air, the ocean, the majestic scenery and the peace. I gradually slipped into "island time", relaxing and leaving behind the stresses and exasperation of urban existence. And then I discovered birds.

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■ *Southern Lapwings*
Vanellus chilensis
 can be seen almost
 anywhere where there is
 grass or water. They lay
 their eggs on grass
 and will readily attack
 intruders, swooping
 down repeatedly.
 Below, *Black-legged*
Dacnis *Dacnis nigripes*,
 female. This is an
 uncommon bird (1),
Painted Coral Snake
Micrurus corallinus (2),
 a male *Blue Dacnis*
Dacnis cayana. This
 lovely bird gave its name
 to the NGO (3), and
 a *Brazilian Squirrel*
Sciurus aestuans,
 endemic to South
 America and quite
 common in Ubatuba (4).



■ Not your typical iconic tropical coastline - the relentless pounding of the Atlantic Ocean contributes here to the creation of a craggy, rocky environment.

A rugged rocky coastline sculpted for eternity by the force of the waves



■ A male Violet-capped Woodnymph *Thalurania glaucopis* hummingbird shows to advantage its dazzling iridescence when lit from the right angle. Far right, a tiny unidentified Praying Mantis nymph (above) and a bright blue Mangrove or Land crab *Cardisoma guanhumi* emerging from its dug-out in the soil (below).





Fishing boats and human habitations dot the Mata Atlantica coastline - testimony to the severely endangered status of this unique habitat and the urgent need to protect it.



■ A trio of snow-white Cattle Egret *Bubulcus ibis* lift off one after the other in a graceful, time-frame-like sequence.

It all began casually with a very, very common Black Vulture that presented me with a good photo opportunity (at the time my equipment consisted of an ultrazoom compact camera), and quickly escalated into a daily game of recording and identifying the birds I saw in my garden. I came up with a hummingbird species that had never been seen in Ubatuba before (identified by a hummer specialist, not myself), and that only pushed me on. I put out feeders with bananas and papaya, and bottles with sugared water. I offered seed. It soon became clear that strange things were happening in my garden. Black-backed Tanager, Blue-naped Chlorophonia, Black-legged Dacnis, Black Hawk-Eagle and other species that weren't everyday sightings in Ubatuba seemed to congregate in my little patch, staying on for a while or just passing by.

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Left, a bromeliad blooms high up in the forest canopy. Right, a male Golden-rumped Euphonia *Euphonia cyanocephala*. This is a yearly winter visitor to Ubatuba, and a precious one: its distribution isn't wide and it is more easily seen at higher altitudes (1), and a Glittering-throated Emerald Hummingbird *Amazilia fimbriata* (2).



And I was out there looking for them. After my garden, the world. Armed with my first dSLR and a decent birding lens, I began to venture outside my little corner of paradise to see what I could see. The Ubatuba bird list comprises around 500 species, meaning a wide variety of places to choose from and a lot of different terrain to explore. I could, for instance, go to Ubatumirim, a huge, gloriously deserted beach, to look for migrant shorebirds and terns; or to the Perequê-Açu or Rio Escuro river mouths to see egrets, herons, cormorants and kingfishers; to Fazenda Angelim for one of the most sought-after endemics, the Buff-throated Purpletuft; to Cambucá for Black-capped Donacobius, Riverbank Warbler, Streamer-tailed Tyrant, Black-capped Becard and many other species; to Folha Seca for a hummingbird fest – 21 species have been recorded there. Or almost anywhere to see stunning birds like the Brazilian Tanager, the Green-headed Tanager and the Red-necked Tanager.

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■ A coastal panorama at sunset shows with great clarity the complex structure of the highly fringed, deeply indented coastline of Ubatuba and its surroundings.

The Mata Atlantica warm, humid environment is rich in orchid species, often seen blooming as here and usually found in the upper storeys of the forest canopy.



*No wonder in Brazil
these tiny birds are
called beija-flor,
flower-kissers*



■ A Saw-billed Hermit *Ramphodon naevius* sips nectar from a banana flower. Endemic to the Atlantic Rainforest in the southeast and parts of the south of Brazil, this is a very territorial and large species - for a hummingbird, of course.



Left, a spectacular rainbow over the Ilha das Cabras and the Atlantic Ocean facing Ubatuba's coastline. Far left, a male Blue-naped Chlorophonia *Chlorophonia cyanea*. More common in southeastern Brazil's higher ground, it shows up in Ubatuba every autumn, sometimes staying the winter (1) and the showy inflorescences of a forest Heliconia (2). Right, a male Violet-capped Woodnymph *Thalurania glaucopis* hummingbird (3) and a hybrid Marmoset, a cross between *Callithrix aurita* and *Callithrix jacchus* (4).



The Atlantic Rainforest in Ubatuba includes restingas and mangroves, lowland and interior forests and high altitude fields, each with its own characteristics and myriad animal species. Mammals are the most difficult animals to see. Within the realm of the Serra do Mar State Park, Picinguaba is the one location where forest meets sea. But there are other such places out of the park, such as Puruba, and a hike through the dense, dappled forest to see a Common Potoo will suddenly end in the bright white and blue of a sunny, deserted beach, making anyone squint. Being a tourist in my own backyard was the beginning of my journey of discovery of Ubatuba and its natural wonders. The ever-changing patterns of sunlight and shadow, the vibrant colors, the smells, the cacophony of birdsong, frogs and insects, the endless parade of fascinating creatures...

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A peaceful image of the coastal landscape of the Indaiá River in Ubatuba shows how seamlessly the rainforest and estuarine/beach environments blend here.





Two Neotropic Cormorants *Phalacrocorax brasilianus* dry themselves in the sun between dives. Below, an exceedingly rare Guanabara Spotted Night Snake *Siphlophis pulcher* from Alcatrazes Island (1), a Brazilian Tanager *Ramphocelus bresilius* - an Atlantic Rainforest endemic and one of its most stunning birds (2), a fruit of the rare *Clusia lanceolata* (3) and a Green-headed Tanager *Tangara seledon*, a noisy, outgoing and very colorful species (4).



*A warm, humid heaven
for hundreds of rare
amphibian and reptile species*

Steep and rocky, the mountain streams flatten out as they near the Atlantic coastline, creating a multitude of perennially warm, humid ecological niches.



■ *Left, a stunning portrait of a rare Golden Lancehead Bothrops (or Bothropoides) insularis, a venomous pitviper species found only on Ilha da Queimada Grande, off the coast of São Paulo. Right, a Common Potoo Nyctibius griseus. It is hard to spot, even when it is perched in an open area, as it blends in perfectly with its surroundings. Resting or asleep during the day, this species is active only during the night (1). Below right, a Blue-winged Parrotlet Forpiz xanthopterygius. This is a highly social species, usually appearing in noisy flocks to feed on fruits and seeds (2).*



I became completely smitten with the forest. Finding out how threatened it was and how close we were to losing our natural heritage and its irreplaceable biodiversity led to the next step: wanting to proactively preserve it. And thus Projeto Dacnis, the non-profit organization I run, was born. The research leg of the NGO is headed by Edelcio Muscat, a wonderfully inquisitive and patient biologist and herpetologist who developed his own view of Ubatuba's diversity through macro lenses. It is a joy to observe him handling the serpents that come his way; with a mixture of respect and tenderness he will eventually coax them into the perfect photo angle, then put them back into the box and set out to release them far from human presence. Edelcio's extensive knowledge of serpents, reptiles and amphibians has earned him a reputation that extends far beyond the borders of Ubatuba. Dacnis is involved in several research projects in and around the county – after all, the Atlantic Rainforest is far-reaching –, in partnership with ICMBio, the federal environmental agency, and Instituto Florestal, its state counterpart.

Two of these projects involve islands where there are fantastic and mythical serpent species; a third project is about surveying animal species in the Cambucá nucleus of the state reserve to develop a conservation and management plan for the area.

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Black or Turkey Vulture Coragyps atratus, an exceedingly common scavenging species found in Central and South America.

■ A huge Land crab shows no fear when approached on one of Ubatuba's many beaches. Below, male Brazilian Ruby Clytolaema rubricauda, a dazzling hummingbird species endemic to the Atlantic Rainforest in the southeast and south of Brazil (1), an uncommonly colorful Jararacuçu Bothrops jararacussu, one of Brazil's most dangerous pit vipers (2), a large Tarantula Vitalius wacketi, a common inhabitant of the Atlantic rainforest (3) and a Clayrobber frog Haddadus binotatus (4).





■ A stunningly colorful male Red-necked Tanager *Tangara cyanocephala*. Females of this spectacular species do not show any orange shades on the wing. These are noisy birds, often showing up in groups to feed on seed or fruit.



Man-made forest trails offer a more open, drier environment. If properly managed, even such areas can be beneficial to the local wildlife and can create a multitude of new habitats.

■ A pair of Southern Caracara *Caracara plancus* - a very common raptor and scavenger in Brazil - mating on the treetop with another lone individual on a branch below. The other birds in the photo are Black (or Turkey) Vultures *Coragyps atratus*.



Closer to home, our 40.5 hectare area of private reserve is undergoing the same process, and more often than not one of us will be there, camera, binoculars and voice recorder in hand, to map out our own turf and study the rare Buffy-tufted Marmosets that made their home there. The property's caretaker, Faustino, was brought up in an Indian village, speaks fluent Tupi, knows more about animals than many scientists and handles serpents better than most. He will phone Edelcio in a state of almost childish excitement to tell him there's a huge jararacuçu or coral snake waiting for him there, or he will call me to lengthily describe the new hummingbird he saw. This kind of enthusiasm and respect for life is what makes Dacnis tick. And it is one of our objectives to instill this attitude in the local communities with which we work. ●



■ *Yellow-headed Caracara* *Milvago chimachima*. This small raptor is commonly encountered in Ubatuba and elsewhere in Brazil. Below, *Chestnut-bellied Euphonia* *Euphonia pectoralis* (1), *Tiger Rat Snake* or *Cribo* *Spilotes pullatus* inflating its neck in a threat display (2), a very common and quite dangerous *Jararacuçu pit viper* *Bothrops jararacussu* (3) and an unidentified, metallic green rainforest spider (4).



1



2



3



4



*A mixed group of Royal Terns *Thalasseus maximus* and Cayenne Terns *Thalasseus sandvicensis eurygnatha*, with adults and juveniles by the surfline.*



Left, a Great Egret *Ardea alba* is reflected in the still waters of a coastal lagoon. Right, a male Yellow-legged Thrush *Turdus flavipes*. This species is found in several parts of Brazil, but it is never common. It hung around at Dacnis because the Brazilian cherry trees (*Eugenia uniflora*) were laden with fruit, one of which is in its mouth (1). Below right, Blue Dacnis *Dacnis cayana*, female (2).

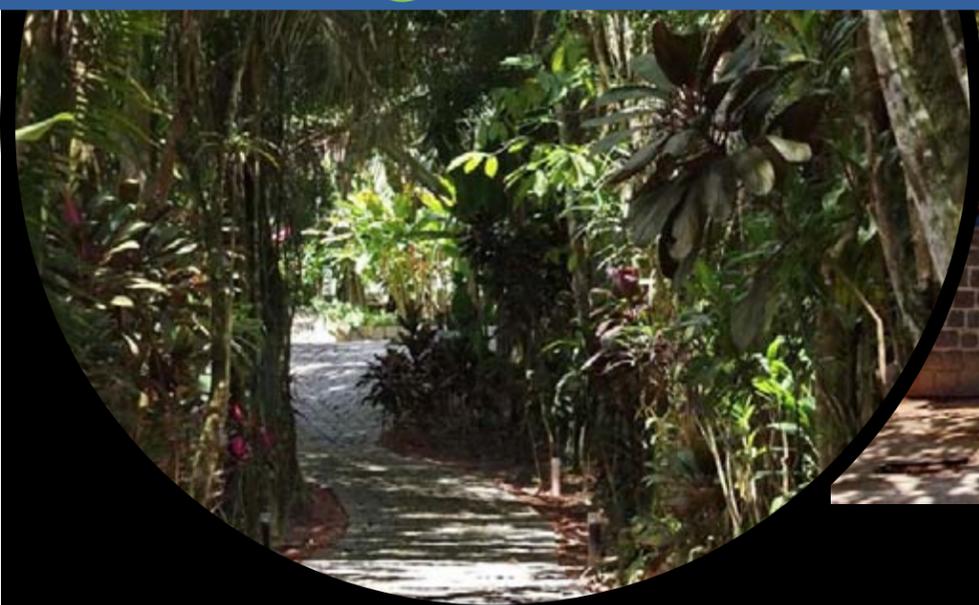




*A precarious
act of balance
between rainforest
and ocean*

Seawater-resistant vegetation such as that of several mangrove species - threatened worldwide - contributes to the ecological balance along most tropical coastlines.

At-a-glance travel guide



USEFUL TIPS FOR YOUR EXPEDITION

Some simple, common sense, field-tested advice and information to make the best out of your trip and avoid hassles, worries and problems

ROUTE: Ubatuba is 240 km from São Paulo and 310 km from Rio de Janeiro. The majority of international flights lands in one of these two cities. From either one, access to Ubatuba is by road. From São Paulo there are several daily buses to Ubatuba and the trip takes four hours; it is a five-hour bus trip from Rio to Ubatuba. Another option is renting a car at the airport and driving yourself. If you are into serious birdwatching, the best recommendation is hiring a guide who will take care of the logistics for you, which usually includes getting you to Ubatuba.

MEANS OF TRANSPORT: Ubatuba is very spread out and your destinations here can easily be 40 km apart. If you have a guide, then there is nothing to

worry about because he will get you around. Otherwise, rent a car here (or have friends in the area!) and have a map or GPS. Little local roads can be bad, unpaved, often sandy, rocky, muddy or all of the above.

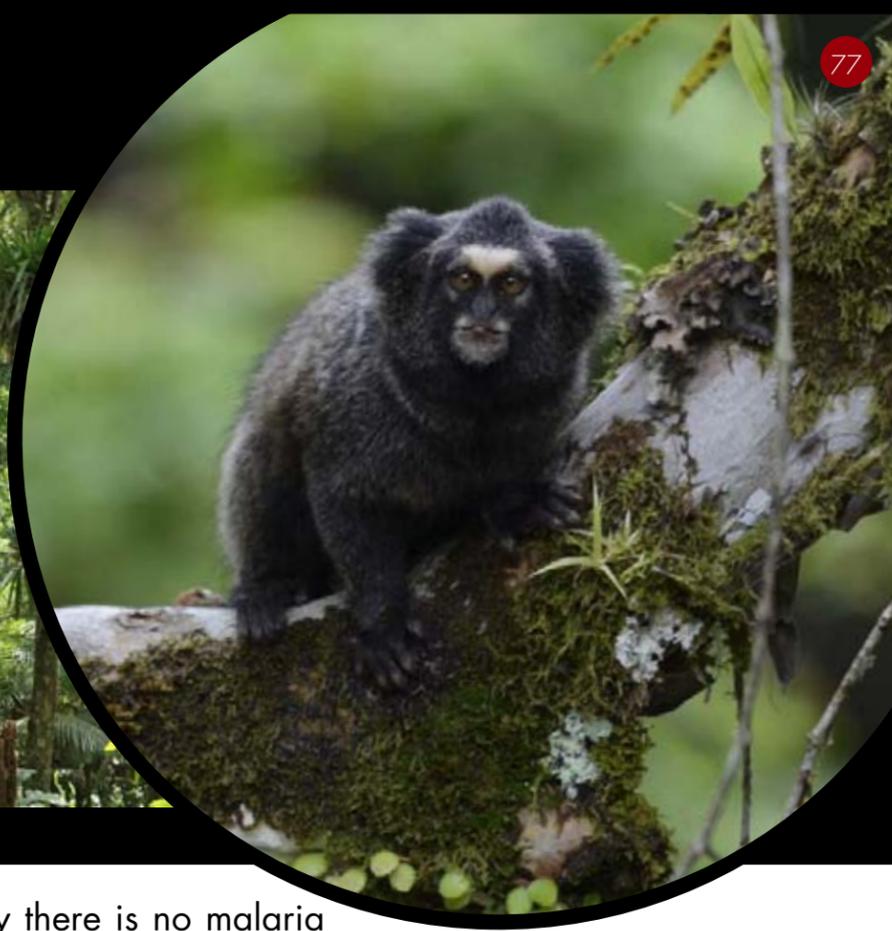
CURRENCY: The national currency is the Brazilian Real, pronounced with a stressed "a". One real, two reais. You can get local currency in most ATMs, using your international credit card; travelers cheques may get you nowhere, but credit cards are widely accepted.

ACCOMODATION: There is lots of it, everywhere. From modest *pousadas* – analogous to bed & breakfasts – to more luxurious beachfront hotels and self-catering facilities, the range is wide and will cater

to most tastes and budgets. If you want to wake up to birdsong in the forest, [Dacnis](#) (pictured above) offers two comfortable en-suite rooms and a well-equipped kitchen for you to prepare your own meals. Breakfast on the terrace is a lot more than what is on your plate: you also feast at the sight of countless hummingbirds around feeders right in front of you.

FOOD: Fish, shrimp and squid in all kinds of dishes are normal; availability and price depend on the time of year. We love finger food: breaded squid, fried manioc fingers, sun-dried meat in little balls, *pastel* (a fried, light, savory pastry filled with shrimp, meat or cheese) or *pão de queijo* (a fluffy cheese bread) go well with a very cold lager or a *caipirinha* – sugarcane spirit, lime, sugar and

Sun, sea, sand and rainforest - a winning combination



ice, the Brazilian national drink – at a day’s end. The traditional inhabitants of this part of the coast always had, as their main ingredients, what ocean and land yielded: fish, seafood, bananas, coconuts, hearts of palm, peppers, manioc. They can be found in traditional dishes like *moqueca*, a fish and seafood stew, or fish with plantain, and are also part of recipes with a modern, more refined, twist. Be careful if you add pepper, as the local kinds are known to be fiery. Another Brazilian specialty is barbecue.

LANGUAGE: Portuguese, or rather, Brazilian Portuguese. Some people will speak English, but don’t expect to find them everywhere. If you speak Spanish, you’ll get around with no problems.

WORRIES: The crime rate in Ubatuba is comparatively low, and the most common occurrences are thefts of opportunity and burglaries during the high season. It is never a good idea to leave valuables lying around in plain view in the car, for instance, and it doesn’t cost to keep an eye on your photographic equipment. Walking in town after dark should be safe.

When hiking in the forest it is best to wear hiking boots and long pants, and always look before you put your foot down, especially behind big rocks: there could be a snake there, and some of the local ones are very venomous. Do not move rocks or sit on them before inspecting the surroundings first. In places with low vegetation or high grass, ticks are a problem. Mosquitoes and other nasty biting bugs are ubiquitous. Repellent is mandatory, and carrying anti-itch ointment in your medicine kit can do no harm. It is advisable to avoid high season, between Christmas and the end of January, and the extended Carnival holiday, which happens fifty days before Easter, because it is very crowded. Traffic will be bad and there will be queues in most places, so you will waste a lot of time you could be using better. And prices are higher, too.

HEALTH: The main concern are insect-transmitted diseases, especially dengue fever in the summer months. The water is okay, but not even the locals drink it straight out of the tap (it smells of chlorine); filtered and bottled water is fine. The food, even raw, is generally safe, especially in the more popular

places. Luckily there is no malaria or Yellow Fever in Ubatuba.

CLIMATE: Late spring and summer – from the beginning of December until late March – can be hot. It’s less about the temperature (which very rarely climbs above 34°C) and more about heat combined with a consistently high humidity, which can make it muggy and unpleasant. During these months, hiking in the forest tires you out easily; it feels like a sauna in there. This is also the rainiest part of the year, and dramatic, intense summer storms are common. In winter, daytime is usually sunny and beautiful, whilst in nighttime the temperature can fall to about 12°C.

BESIDES: Ubatuba is a laid-back, cozy beach town. Many secluded beaches are truly spectacular and if you are into sun, sand and water, they deserve to be explored. Some of them also offer good surfing, and Ubatuba is often called “The capital of surf.” Visits to an indigenous village or a *caçara* community can also be easily arranged for a bit of local color and a better feel for history. ●