

ERICEIRA

WORLD SURFING RESERVE



A HERITAGE THAT DEFINES US

MESSAGE FROM MAFRA MUNICIPAL COUNCIL

More than sculpting the passage of time on the rock with power and voracity, the waves in the Municipality of Mafra have also moulded the character of its people, influenced the lives of its communities and rewritten many stories rooted in local tradition.

This is why they are a clear source of originality and singularity in the area and must be valued as a special, exclusive attraction. For the Mafra region, the fact that this fragile, irreplaceable resource has been declared a World Surfing Reserve means much more than international recognition of its natural qualities and its social and cultural calling. It is a tribute to the people of the sea, who

**THE COUNTRY THAT FROM THE SEA
GAVE 'NEW WORLDS TO THE WORLD'
NOW PLAYS A MULTIFACETED ROLE.**

deserve credit for honouring it over the centuries and, above all, for accepting responsibility for preserving this precious universal heritage and ensuring that it will continue to be enjoyed to the full by coming generations, like the pioneers of surfing in Portugal who had the good fortune to discover it.

To preserve means the protection of nature, spatial planning and organisation, a sustainable range of tourist products and

environmental education among other essential facets of a broad challenge. This is why this responsibility undeniably requires a joint effort involving the bodies responsible for managing the area and also the community itself, i.e. local associations, surfing schools, companies in the sector, surfers and the public at large.

The country that from the sea gave 'new worlds to the world' now plays a multifaceted role. It is both the guardian of its waves and promoter of new uses (of which surfing is a perfect example) that combine sustainable development and the creation of new opportunities so well.

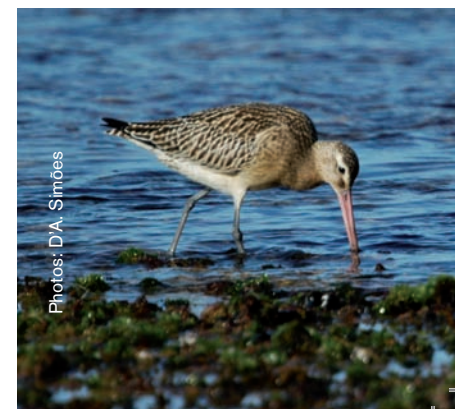
Mafra Municipal Council will continue, as always, to make a firm commitment to improving the conditions and facilities on its coast in respect for nature, so that it can be enjoyed appropriately and to the full. At the same time, it wishes to be recognised as the driving force behind an extended network for preserving improving and promoting sport and tourism on the coast that has been honoured with the status of a World Surfing Reserve.

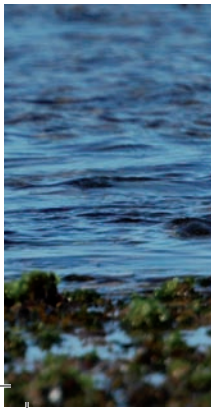
After all, it is our heritage, that ancestral sediment of experiences, which explains what we are and what we want to be!

Photos: Ricardo Bravo



Photos: D.A. Smøes





SURF LOCALLY SAVE GLOBALLY

WORLD SURFING RESERVES AND THE BIRTH
OF A NEW ENVIRONMENTAL ATTITUDE

Manuel Castro

The World Surfing Reserves (WSR) represent a commitment to identify and preserve our planet's most extraordinary surfing areas and the habitats around them. Carefully following the standards set by the UNESCO World Heritage Programme and the Australian surfing reserves, the international World Surfing Reserves Council forms partnerships with local surfers and environmentalists to select, enshrine and manage the sustainability of outstanding wave quality areas all over the planet.

The WSR classification process involves four phases: nomination, selection, enshrinement and management. Eligibility is based on a number of strict criteria. These are the quality and consistency

WSR STATUS INSTILLS A STRUCTURAL AND FUNCTIONAL SENSE OF COMMUNITY TO AN ORGANIC WORLD THAT LIVES IN THE MIDST OF HYDRODYNAMICS, GEOLOGY, BIOLOGY, GEOGRAPHY, THE PEOPLE WHO LIVE FOR SURFING AND THOSE SEEKING INSPIRATION FROM THE FERTILE IMAGINATION OF THE BEACH.

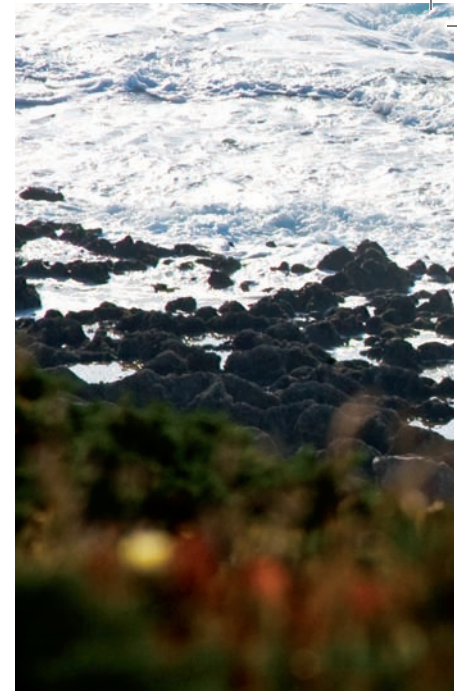
of the area's waves, its environmental wealth and sensitivity, the importance of the waves to the local surfing culture and its history and the local community's support. When a surfing area is selected, the WSR council provides guidance to the locals in forming a steering group to draw up a management plan that will enable it to be the reserve's guardian from then on.

The WSR is an awareness-raising programme, a vehicle for communicating a wave's essential value to its local community and the rest of the world. After enshrinement as a reserve, the locals have a public tool with which to protect their waves. WSR status instills a structural and functional sense of community to an organic world that lives in the midst of hydrodynamics, geology, biology, geography, the people who live for surfing and those seeking inspiration from the fertile imagination of the beach.

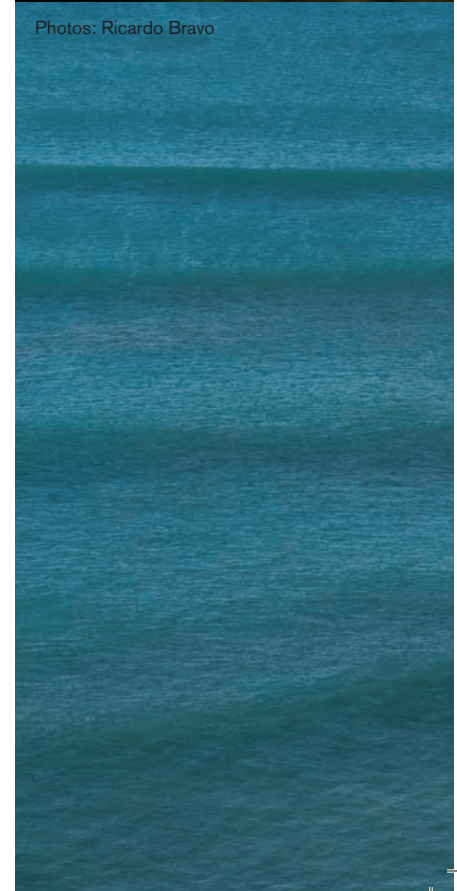
It is up to people, to all of us, to take the next step. Protecting this magnificent heritage is the obligation of all surfers. It is not enough to enjoy the privilege exclusively and disinterestedly. We are not just sharing with the world something very special, unique and terribly vague. This may be a gift to help us save the world. And this ambitious statement is by no means abstract.

"World Surfing Reserves are about surfers saving the world one wave at a time," said author Drew Kampion in the manifesto of the first WSR, in Malibu, California. This is the essence of the WSR containing natural and human heritage, beauty and perfection, quality and value. It could be anywhere in the world and the platform of reserves to be created may become a cutting-edge collaboration network in defence of the global environmental heritage. Above all, because it must and does count on the passion and determination of these activists who have the necessary competences for shouldering this responsibility, namely surfers. Kampion also asked if there was another global network of alert, persistent, environmentally aware individuals who were similarly trained in the art of navigating variables, overcoming adversity, and appreciating the rarities of nomination, enshrinement and preservation who could save the world.

The certification of the undeniable value of a coastal region in accordance with such universal principles as preservation, sustainability, conservation and cultural celebration and subsequent launch in a vast network of these regions starts with a small local gesture but can in fact become a global movement. Kampion wrote, "Each local monument (wave) is a symbol for the greater monument that is the worldwide network of World Surfing Reserves. These will henceforth be dedicated to the benefit of present and future generations." The first step has been taken. So what are we waiting for to start saving the world?



Photos: Ricardo Bravo





S. LOURENÇO >

COXOS >

CRAZY
LEFT >

CAVE >

RIBEIRA
D'ILHAS >

REEF >

PEDRA
BRANCA >

Tiago Oliveira, Coxos.



José Gregório, Pedra Branca.



Photos: Ricardo Bravo



WHY GO FAR WHEN IT'S ALL SO CLOSE?

FOR THE PRESERVATION OF OUR SPACE OF CONVERGENCE

Human beings need space and time to contemplate the life within them. There are many different ways of doing this. Sport is the solution for some, as literature or music is for others. There are also people who find this essence in nature, in the community of believers, in their kitchen or flower gardens. There are, however, those who find their place by combining sport and nature - in the ocean, in the sea where they imbibe the tranquillity of the shades of colour and sounds, commune with others and measure themselves within.

Outsiders think that it is something of no importance that makes no sense. For insiders, whatever their age, it takes on hues that are vital for their inner balance. The question of measurement is not innocent. The sea and its silence teach humankind humility and reveal their true dimension.

This attitude can be viewed from several angles. There is an economic aspect, with commercial and financial pressure encouraging spending and sometimes leading to the abuse of nature. The sports aspect has many positive sides, often unfortunately confused with the economic aspect. There is the amateur aspect, which brings friends and family together. And finally there is the environmental aspect, which is deeply marked by intense contact with the power of the elements.

Regardless of the degree of identification and proximity that we have with any of these approaches to the ancient Polynesian sport, we believe that it is in the latter two aspects that we all come together and create a culture of harmony between sport, nature, socialisation and sharing. This is the essence of surfing: a point of convergence, a meeting place, a place which fulfils the need for time and space that we mentioned above.

Surfing... the never-ending quest for that wave. We travel with our board under our arm or in our dreams in search of protected, unknown waves in an environment unchanged by humans.

We wander around distant islands and far-flung countries, looking for time and space uncontaminated by the unbridled development of our societies. But in the end we are already where we want to be.

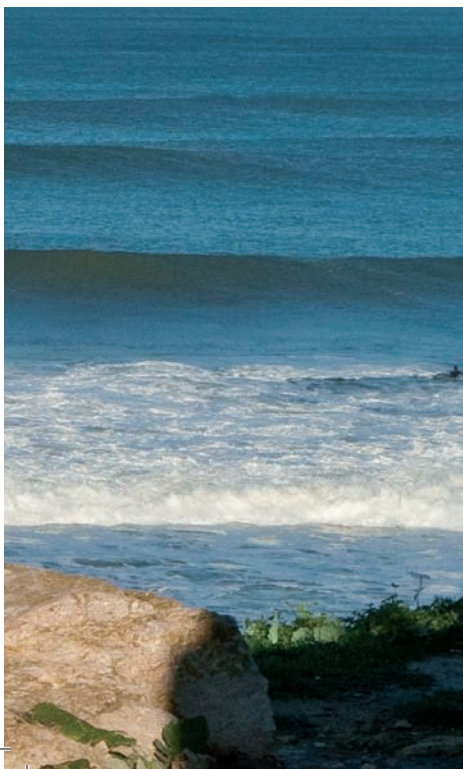
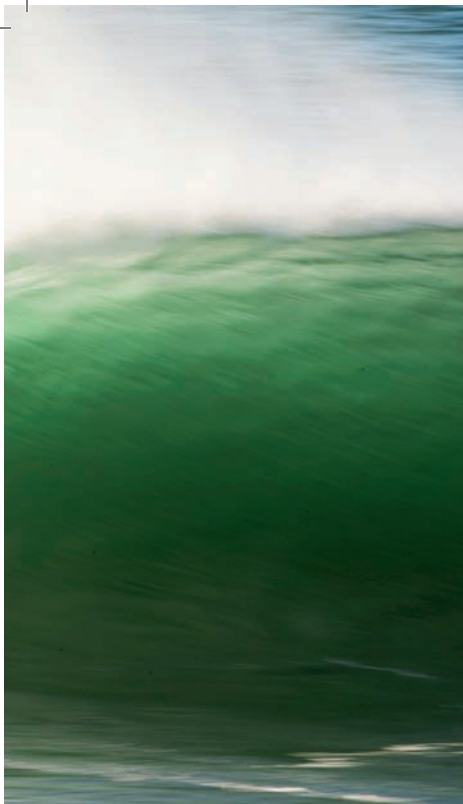
Whether we live here or visit, we all fall in love and want more and more, because here too we can find that wave and share the good fortune that nature has bestowed on us in such a small space with so many emotions.

SURFING... THE NEVER-ENDING QUEST FOR THAT WAVE. WE TRAVEL WITH OUR BOARD UNDER OUR ARM OR IN OUR DREAMS IN SEARCH OF PROTECTED, UNKNOWN WAVES IN AN ENVIRONMENT UNCHANGED BY HUMANS.

It is this excellence, now recognised as a World Surfing Reserve, which we all want to maintain and preserve so that we can all enjoy it and guarantee that future generations will also be able to do so. The community of locals and visitors grows from one generation to the next and awareness of sustainability should also grow. This is the motto for all the natural wealth of our waves to continue so that our children and grandchildren can one day tell the same stories, experience the same waves and the same emotions and share them with those who visit us.

We should all therefore be the World Surfing Reserve so that the water ballet goes on for ever.

Associação dos Amigos da Baía dos Coxos.



SILVER BLUE

ERICEIRA SURF CLUBE IN THE AGE OF THE WORLD RESERVE

In 1992, the year that Ericeira Surf Clube was founded, there were many different ideas, many dreams and above all there was a lot of love for the sport and our region's waves. The club appeared essentially as an act of affection and respect for the sea and also great dedication and celebration of the deeply ingrained maritime culture of which we are heirs and followers. Right from the start, the club sought to pass down the values of this precious legacy to new generations.

WE FEEL THAT PASSING ON THE EXPERIENCE OF RIDING A WAVE IS MORE THAN TEACHING SOMEONE HOW TO TAKE OFF AND CUT BACK.

The club's foundation helped us realise our hopes and dreams by doing and disseminating water sports and a number of premises that involved not only the development and promotion of the sporting life but also the defence of the geographical and environmental treasure that we had been given. We feel that passing on the experience of riding a wave is more than teaching someone how to take off and cut back. It is explaining the peace of mind that comes from it; it is paying tribute to nature and encouraging people to fight to preserve it. The distinguished award of the World Surfing Reserve designation to this region confirms that all our publicised sports events and environmental awareness campaigns have borne fruit.

Ericeira Surf Clube now accepts its responsibility as a partner in this unusual adventure, where the values of communing with the sea that underlay its foundation are confirmed. This commitment will certainly chart a new course for the way we regard the maritime milieu and will help highlight its importance to all of us who love and idolise it. It will also serve as a warning to those who do not experience it in the same way as we do. In the honourable position entrusted to us as active partners in maintaining and preserving the reserve, we cement all our ideals of communion, dedication and defence of these seven treasures in the form of waves, so unusual on our coast, which have enabled us to share the legacy that we wish to leave to future generations.

We would like to leave a word of encouragement to all those who enjoy the ocean and make it their second home. Do not hesitate to invite strangers in and show them the 'family silver', as who could be better hosts than their 'owners' to demonstrate the true spirit on which the values of the tribe of the waves are based? For those who have only just realised the wealth that we have, nurture it and do not allow the principles of preservation, sustainability, management and cultural celebration underlying the creation of the World Surfing Reserves to die. With this in mind, we would even dare to say that the waves really are bluer in this region of ours and yours.


Ericeira Surf Clube



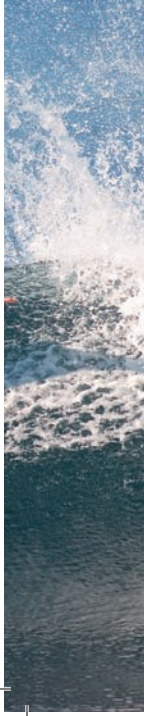
Tomás Fernandes
Photo: carlospintophoto.com



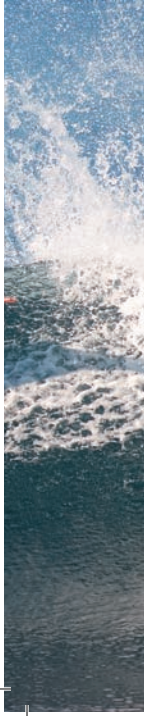
Miguel Fortes
Photo: André Carvalho



André Abrantes
Photo: Personal Archive



Mica Lourenço
Photo: Ricardo Bravo



Felipe Valadão
Photo: Personal collection



Felipe Henriques
Photo: Ricardo Bravo



A SAILOR IS AN ART A FISHERMAN IS A CRAFT A SURFER IS SOMETHING ELSE...

THE TRANSFORMATION OF THE RELATIONSHIP BETWEEN MAN
AND THE SEA IN THE REGION OF THE RESERVE

JOÃO VALENTE

*"There, floating almost invisible,
Dicing with death at any moment
Man, with the waves in awful turmoil,
Faces the immensity and the elements"*

Mendes Leal, "Mare Magnum!", Ericeira 1857



Paulo Inocentes, Reef,
1980s





When José da Silva Mendes Leal (1820-1886) wrote his poem *Mare Magnum!*, it was not by chance that he was in Ericeira, which was already a popular seaside resort in the mid-19th century, thanks to the rich mineral content of its waters and the beauty of its beaches. We do not know exactly at what time of year the Lisbon writer and diplomat visited the region but it is easy to imagine the sights that inspired him, as no-one can spend any time on this coast without feeling the ocean's magnetism, the attraction of the abyss or the imminent danger looming over those venturing into it. And while today even surfers hold back on those days when the elements seem to conspire to make the ocean's fury batter the beaches and cliffs along the coast of what is now a World Surfing Reserve, imagine the feelings of a population made up of fishermen, sailors and their families who knew that each day that dawned was a threat to the sons of their town.

A THOUSAND-YEAR-OLD TRADITION

Ever since Ericeira has existed, it has always been a place of seafarers. Whether or not it is proven that the Phoenicians passed through here around 1000 BC or that its name is surprisingly linked to hedgehogs (*ouríços-cacheiros*) and not sea urchins (*ouríços-do-mar*), as would be more logical, there can be no denying that its inhabitants have always identified with ocean life. Surfers are the latest descendants in a long line of men and women who for their own reasons and purposes found a meaning for their lives and a reason for their existence on this wild coast.

The town's first charter in 1229 contains the oldest references to the *jagoz* (the name given to the natives at the time) fishermen, who were actually of a different ethnic origin from the neighbouring settlements. And while the origins of the fishing tradition are lost in the mists of time, the reasons for setting sail that took root in the town that today gives its name to



the World Surfing Reserve went far beyond this activity. In the 19th century, Ericeira was the most important port in the province of Estremadura and the fourth busiest in the country after Lisbon, Porto and Figueira da Foz.

At the time, the small town was home to a respectable group of officers and captains who commanded important yachts, such as the famous *Cutty Sark*, when the British clipper, then



renamed *Ferreira*, was owned by the Portuguese shipping company *Joaquim Antunes Ferreira e Cia*. According to José Caré Júnior in *Memórias da Ericeira Marítima e Piscatória*, (Mar de Letras, 2000), there was even a hierarchy for men of the sea that distinguished the crews of commercial vessels, who practised 'the art of sailing', from those who devoted



themselves to fishing. This gave rise to the expression 'a sailor is an art and a fisherman is a craft'. Surfers added a new feature to this formula.

CHANGE IN A PARADIGM

These new men of the sea and – and, we should emphasise, women, for reasons much more important than any kind of political correctness – soon recognised ideal conditions for the formation of matchless waves in the long slabs of rock and craggy coastline of the region. They have helped to carry on the age-old tradition of the land and have also profoundly changed the way in which the sea is instinctively perceived, culturally regarded and economically valued.

As is common in areas with a strong maritime tradition, the local people's relationship with the ocean involves love and grief, hope and fear, exultation and pain. José Caré Júnior devotes an entire chapter in the above work to Ericeira's tragic maritime history and includes a long list of shipwrecks on the high seas and at the entrance to the local harbour. These are true stories of life and death that haunt the residents. Luís Augusto Palmeirim (1821-1893) vividly portrayed their anguish in *Cartas da Ericeira*, quoted in an excellent compilation organised by Sebastião Diniz in *Ericeira, Um Lugar na Literatura* (Mar de Letras, 1997). He describes the terror experienced by families in the cold dead of night in November, when the raging sea breaks against the rocks or rolls over the crags and whispers threats in the ears of those with loved ones far from home. At the centre of this anguish are the waves, that mysterious, fascinating natural phenomenon

that brings us to this moment of celebration, the high point of a whole glorious history devoted to the sea.

How paradoxical, even sacrilegious must the act of gliding over waves sound to the ears of those accustomed to these treacherous manifestations of distant forces, the enemy to be avoided, the omnipresent danger, the guardian of a forbidden



Photo: Ricardo Bravo



Photo: Ricardo Bravo



Pedro Martins de Lima, son of the first Portuguese surfer, in Coxos in 1977 the day after the sea broke the Ericeira harbour breakwater.



1990. Tom Curren in Ribeira D'Ilhas on the way to his third world title.

kingdom in which we are always intruders and never inhabitants, however long we spend there and however much we dedicate ourselves to it. How improbable the corridor of waves must seem to all those who have had an undeniably romantic but essentially utilitarian relationship with the sea, that it was a recreational, basically useless activity that won its home town such a distinguished honour so necessary to the preservation of this priceless living heritage. The waves do not nourish. The waves do not help in sailing or fishing. The waves serve no purpose other than the fleeting, apparently pointless enjoyment of those beings who spend

THE COMMUNITY OF THE WAVES

Like no other part of the Portuguese coast, Ericeira (and this, out of jurisdictional fairness, includes the parishes of Santo Isidoro and Encarnação, where some of the reserve's waves are also located) attracted and captivated these new sea-goers, practitioners and preachers of this different relationship between Man and the immense mass of water that gives life and colour to the planet. Ericeira owes its origin to little-known peoples from other oceans. When we say attracted, this is to distinguish between the locations that generate communities of surfers for merely social and geographical reasons, when locals take up an emerging sport just because of the favourable conditions, from those that, thanks to their exceptional characteristics, charm and seduce outsiders and, like sirens intoning their fatal chants, seize them and never let them escape.

The first were indeed foreigners who came from far-away

countries and stayed for as long as the waves lasted unless they were attracted by the chants of more distant sirens. They were followed by other 'foreigners', who came from closer by, from other beaches in Portugal. They were gradually beginning to discover the magic of the sport of the Polynesian kings and rapidly adopted the region's bays and rocks as a special place for pleasure and challenges. Short visits turned into long stays and then seasons, until the place became home and transformed them from former visitors to today's inhabitants. Then came the local townspeople and those who were not jagozes by blood but had strong roots after generations of passionate devotion. They all helped to form the community that has now been mobilised

AS IS COMMON IN AREAS WITH A STRONG MARITIME TRADITION, THE LOCAL PEOPLE'S RELATIONSHIP WITH THE OCEAN INVOLVES LOVE AND GRIEF, HOPE AND FEAR AND EXULTATION AND PAIN.

by this gesture of repayment to the waves that shaped their lives and, in some cases, gave them a livelihood.

Surfers are the users of the sea that have the least utilitarian relationship with it by converting fear of the waves into love, repulsion into attraction. They have wrought a fundamental change in the paradigm of the relationship between Man and the ocean. The violent nature of this coast, which has caused so much anxiety to sea-goers in this land of sea-goers, has transformed people, landscapes and the economy. The challenge is still there, intact, inviting more daring and skilful

surfers to test their limits and skills in this true water ballet of gliding over the waves, the waves that are now deservedly a World Surfing Reserve. Because here there is art and craft and there is also a spirituality that is embodied in an ephemeral, impartial, playful communion of the elements in harmony with this exuberant nature.



SEVEN WAVES MAKE A RESERVE

'If there are only seven seas, there is more land than sea...'
Sete Mares – Sétima Legião

It is only when we consider all the variables necessary to form a wave of extraordinary quality, like those at the Ericeira World Surfing Reserve, that we are really made aware of the phenomenon of nature that they constitute. The formula of angles of exposure to the sea and slope of the seabed, plus the vectors of speed and power, is so complex that even the most unbelieving surfer is tempted to see something divine when he sees one of these waves unleashing its full power.

The few kilometres covered by the Ericeira Reserve are more than a special area for the enjoyment of practitioners of wave sports. They are a true heritage of humanity, now properly enshrined at this level by the status of a world reserve that can be observed and admired by the entire population, regardless of their degree of involvement with sports they host.

The following pages contain detailed descriptions of each of these waves, so that they can be understood, contemplated and protected.

Texts and classifications by members of Movimento SOS – Salvem o Surf

The LIVRO7 Surfer Level classification in the description of the reserve's waves refers to the levels developed in Metodologia 7 (7 Method) in *LIVRO7 - Como Ser Surfista* (How to Be a Surfer) by João de Macedo and recognised by the International Surfing Association - ISA). The method is based on seven basic manoeuvres. A progressive command of them indicates a surfer's development: S turns, floaters, bottom-turns, cutbacks roundhouse, top turns, snaps and barrels.

According to *Recreational Surf Parameters* by J. R. Walker (Department of Ocean Engineering, University of Hawaii, Honolulu, 1974) the break angle concept is defined by the angle between the crest of the wave and the break line. Based on this classification, a wave's ideal break angle should be between 60° and 30° (Mulwijk, 2005), a regressive scale that ranges from beginners (60°) to advanced surfers (30°).





Photo: Ricardo Bravo

PEDRA BRANCA

The first wave that we find, just opposite the Ericeira campsite, is Pedra Branca at the southern end of Empa Beach. Its name comes from a submerged stone, paler than the others, in the area where surfers normally catch the waves. It is a very fast, reef-bottom left that receives SW to WNW swells. Due to the low reef shelf that is exposed at low tide it is normally surfed from mid to high tide. This wave is regular and dangerous and characterised by an area of rapid starts, followed by a barrel to the inside.

Type of wave: Rapid, powerful, barrel left

Type of seabed: Reef

Tide conditions: Mid tide rising

Swell conditions: From SW to WNW

Wind conditions: From SE to NE

Consistency: +++

Break angle: 40°

Length of break line: 50 to 100 metres

Wave height: 0.5 to 2.5 metres

Type of break: Plunging

LIVRO7 level: 6 – Surfers capable of completing the 7 manoeuvres under control and who are at ease under water in powerful waves of at least two metres.



Photo: A. Carvalho



Photo: R. Bravo



Photo: A. Carvalho

REEF

Continuing along Empa Beach, which is bordered by a small cliff, 300 metres to the north we find Pedra Branca's twin beach and a wave called Reef. This right is formed from a very flat reef shelf which starts on land and gets deeper as it stretches NW. This is another regular, dangerous wave that has a very short, fast take-off zone followed by a barrel that ends exactly on the exposed shelf on the surface on the inside. It only works with N to NW swells at mid tide.

Type of wave: Rapid, powerful barrel right

Type of seabed: Reef

Tide conditions: Mid tide

Swell conditions: NW/N

Wind conditions: SE to NE

Consistency: ++

Break angle: 35°

Length of break line: 30 to 70 metres

Wave height: 0.5 to 1.5 metres

Type of break: Plunging

LIVRO7 level: 6 – surfers capable of completing the 7 manoeuvres under control and who are at ease under water in powerful waves of at least two metres



Photo: A. Carvalho



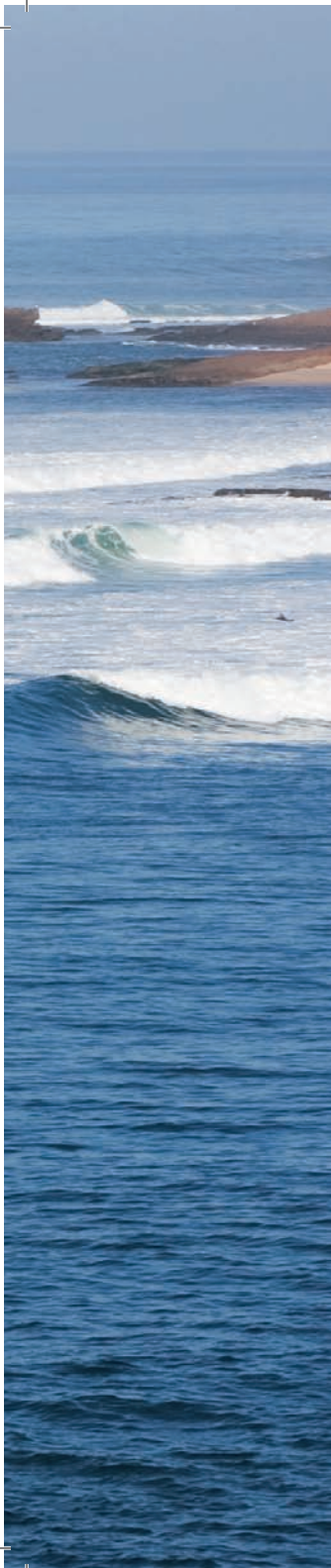
Photo: R. Bravo



Photo: R. Bravo







RIBEIRA D'ILHAS

If we walk 500 metres north, we come across the most memorable and cosmopolitan of all the waves in the reserve. Located in a valley with a sandy beach in the centre where a stream flows into the sea, it is shaped like a natural amphitheatre, which is perfect for surfing events. It is no surprise that it was the venue for the first national and international championships in Portugal. Ribeira d'Ilhas is a long pointbreak right, meaning that the waves follow the contour of the shore, which receives all types of swells and works in all kinds of tide. It is the most consistent wave in the region. Ribeira d'Ilhas and its W/NW swells can provide rights up to 200 metres long. It is a very valuable, competitive wave as it allows surfers very different levels of approach.

Type of wave: Long right

Type of seabed: Rocks and reef

Tide conditions: All tides

Swell conditions: All swells – ideal conditions with W/NW

Wind conditions: Any quadrant – ideal conditions from SE to NE

Consistency: + + + + +

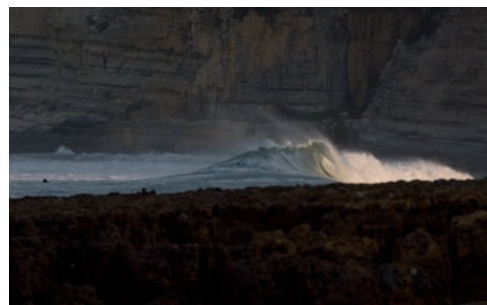
Break angle: 55°

Length of break line: 150 to 300 metres

Wave height: 0.5 to 3.5 metres

Type of break: Progressive / plunging

LIVRO7 level: 4 – Surfers capable of doing take-offs to the side in a single movement to the right and left in unbroken waves and also capable of taking falls in powerful waves of up to one metre.



Photos: R. Bravo

DOIS IRMÃOS BAY

A 10-minute walk northward along the cliff takes us to Baía dos Dois Irmãos, incorrectly referred to by most surfers as Coxos (which is actually a little further north and does not offer good surfing conditions), although the mistake is generally accepted. The bay is surrounded by a 60-metre high cliff and is relatively small at 630 metres between its edges. There are no roads between Ribeira d'Ilhas and Baía dos Dois Irmãos and you have to walk above the cliff through a construction-free area. Dois Irmãos Bay boasts three of the most emblematic, challenging waves in the reserve.

CAVE

We find Cave on the south side of Dois Irmãos Bay, with a shore angle still facing south. Surfers only recently started surfing this powerful right and it has become very well-known in recent years because it is so spectacular and dangerous. It is really extreme, tubular and risky. It starts on a sudden, shallow shelf of reef that does not connect with the land. The water suction from the base to the top of the wave is so strong that it starts below the waterline, hence the name, and the barrel becomes progressively hollower, wider and flatter as the wave comes to an end. Cave should only be used by highly experienced surfers and even they are advised to wear protection.

Type of wave: Fast, right barrel, flat and very dangerous

Type of seabed: Reef

Tide conditions: High tide

Swell conditions: NW/N

Wind conditions: SE to NE

Consistency: +

Break angle: 27°

Length of break line: 30 to 70 metres

Wave height: 1 to 2.5 metres

Type of break: Plunging / from the bottom

LIVRO7 level: 7 – surfers capable of performing different combinations of the 7 manoeuvres in a controlled, fluid manner on the same wave and who are at ease under water in powerful waves of at least four metres.



Photo: R. Bravo



Photo: R. Bravo



Photo: A. Carvalho





Photo: André Carvalho

CRAZY LEFT

Near the south side of the bay is the Crazy Left, a pointbreak that only breaks well in N and NW swells. As it is too exposed to the north wind, it is not a very consistent wave in terms of quality, but when conditions are ideal its walls are fast and tubular with a number of sections offering high speeds. It only gets swells in perfect conditions above two metres because it is located in an area where the water drains off from the bay.

Type of wave: Fast, long, barrel left

Type of seabed: Reef

Tide conditions: Mid tide rising

Swell conditions: N/NW

Wind conditions: SE to NE

Consistency: + +

Break angle: 40°

Length of break line: 80 to 120 metres

Wave height: 0.5 a 2.5 metres

Type of break: Plunging

LIVRO7 level: 6 – Surfers capable of completing the 7 manoeuvres under control and who are at ease under water in powerful waves of at least two metres.



Photos: A. Carvalho

COXOS

Located in a landscape that has remained immaculate since people began to come here in the early 1970s, the Coxos wave is the one that best symbolises the spirit of local surfers and the values governing the World Surfing Reserve: protection, preservation and sustainability. It is formed by a reef that slopes gently and uniformly to the middle of the bay. It has a classic pointbreak configuration with its break line accompanying the contour of the shore from start to finish. It is always a strong wave that has different sections and works with a variety of swell directions. In ideal conditions it offers barrels lasting several seconds. The locals' devotion to this wave was the spark that triggered the whole World Surfing Reserve application process.

Type of wave: Long, powerful right with several barrel sections

Type of seabed: Reef

Tide conditions: Low tide to rising or falling mid tide

Swell conditions: All swells, ideal conditions with W/NW

Wind conditions: SE to NE

Consistency: + + + +

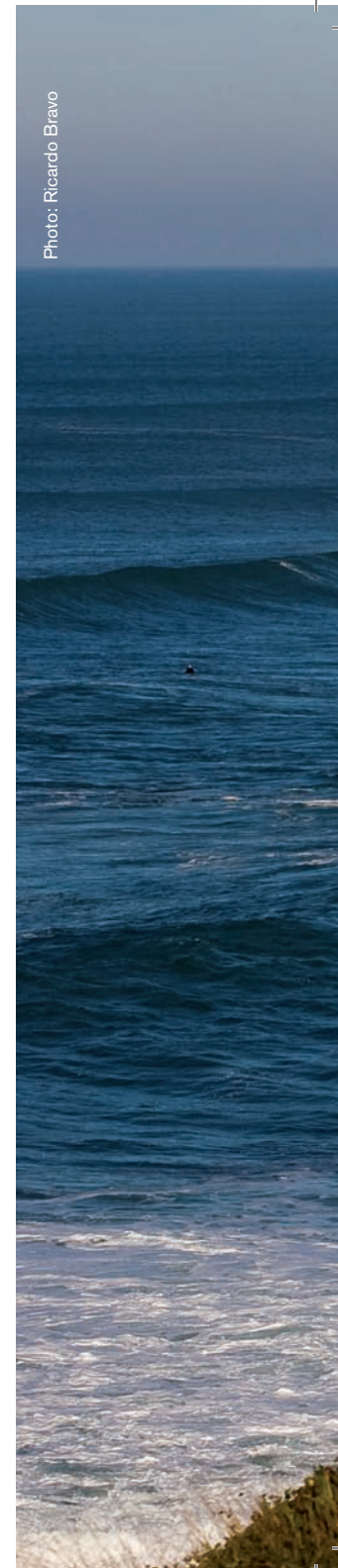
Break angle: 40°

Length of break line: 150 to 300 metres

Wave height: 0.5 to 3 metres

Type of break: Plunging

LIVRO7 level: 6 – Surfers capable of completing the 7 manoeuvres under control and who are at ease under water in powerful waves of at least two metres.







SÃO LOURENÇO

Moving on from Dois Irmãos Bay and walking northwards for a few minutes, we find São Lourenço Beach in a large bay around 1.2 km wide. Near the middle, about 300 metres from the beach, is the São Lourenço wave itself, the last of those in the reserve. These rights start on a rocky plateau to form fast waves with a large volume of water because their peak is located at a considerable distance from the beach. It is normally surfed at mid tide and needs N/NW swells and an easterly wind.

Type of wave: Powerful right with several sections receiving larger swells

Type of seabed: Rocks, sand and reef

Tide conditions: Mid tide

Swell conditions: N/NW

Wind conditions: SE to NE

Consistency: ++++

Break angle: 50°

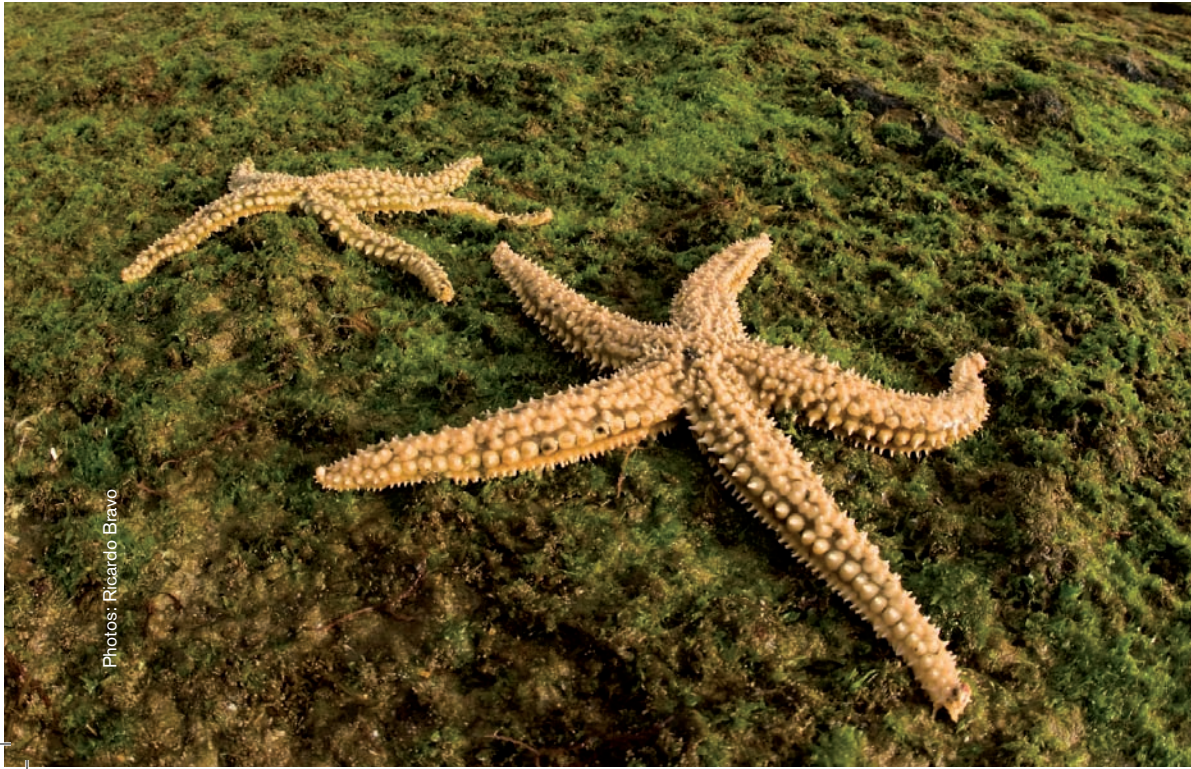
Length of break line: 50 to 150 metres

Wave height: 0.5 to 4.5 metres

Type of break: Progressive / plunging

LIVRO 7 level: 5 – Surfers capable of doing S turns and joining floaters and taking falls in powerful waves of up to a metre and a half







ENVIRONMENTAL CHARACTERISTICS OF THE ERICEIRA WORLD SURFING RESERVE AREA

SOFIA SANTOS AND NUNO SOARES, MAFRA MUNICIPAL COUNCIL

The importance of the ecological values in the Ericeira World Surfing Reserve is clear, as this area belongs to a Natura 2000 Network zone called Site of Community Importance PTCON0008 – Sintra-Cascais. The main aim of setting up the Natura Network was to guarantee biodiversity in the European Union by preserving habitats, fauna and flora*. The Natura Network Sectoral Plan was published in order to achieve the goal of preserving biodiversity. It is binding on public bodies and its measures and guidelines must be included in municipal spatial planning schemes, especially during the revision of the Municipal Master Plan.

There are three natural habitats in the World Surfing Reserve:

- Cliffs with Mediterranean coastal vegetation, with endemic *Limonium spp*
- Thermo-Mediterranean pre-desert scrub
- Coastal dunes with *Juniperus spp*

The following species of flora and fauna can be found in these habitats:

- Coastal cliffs with halophilous vegetation with endemic *Limonium* and *Armeria*
- Juniper groves and holm oak woods (*Juniperus turbinata subsp. turbinata* and *Quercus coccifera subsp. Coccifera*)
- Mediterranean meso-xerophile brush and scrub, mainly holm oak woods, gorse and thyme groves
- Schreiber's green lizard (*Lacerta schreiberi*)
- Spanish terrapin (*Mauremys leprosa*)
- Otter (*Lutra lutra*).

In the World Surfing Reserve area, the river system includes the end zones of the basins of the River Cuco and Safarujo and some small streams.

Geologically*, the beds of these rivers are characterised by alluvium deposits consisting mainly of sand and gravel or deposits of beach sand.

In addition to these deposits, the following formations can be found in this area:

- Lower Cretaceous outcrops made up of dark clay and sandstone, white or yellowish limestone and marly limestone with grey clay intercalations
- Upper Jurassic formations made up of sandstone and clay, white and yellow sandstone with fossilised plant trunks, grey limestone with remains of trunks, grey and reddish sandstone with remains of trunks and sandstone limestone

The World Surfing Reserve is located in the "Oeste Sul: Mafra – Sintra"**.landscape unit.

This unit is characterised by a "close relationship with the ocean and rocky coast, where high escarpments alternate with sandy areas in small coves nestling between cliffs in the mouths of small watercourses. At the top of the cliffs there are some fields bordered by dry stone walls or living or dead cane hedges that protect them from the sea winds and make the landscape unique, with a strong agricultural leaning"**. In recent years, this landscape unit's identity with a coastal strip of great ecological and cultural sensitivity has been moulded by urban expansion and accompanying infrastructure and by a slowdown in farming activity in more rural areas.

Preserving and maintaining the environmental integrity of the World Surfing Reserve has become a supplementary goal to the strategic objectives of Mafra Municipal Council. There are therefore expectations regarding the future and the possibility of consolidating the urban growth of the area surrounding the reserve to make this area of the municipality

* CMM; Ribeira de Ilhas Layout Plan

** Canceled Abreu et al.; "Contributos para a Identificação e Caracterização da Paisagem em Portugal Continental"; Universidade de Évora | DGOTDU







World Surfing Reserves



CREDITS

The following people and institutions contributed voluntarily to this book marking the enshrinement of Ericeira as a World Surfing Reserve:

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Back cover photo: Tiago Pires, Coxos

Credit for photos: Ricardo Bravo

The World Surfing Reserve is the result of a long series of individual and joint efforts and collaborations. Special thanks must therefore go to all the local and international people and organisations who contributed to making the Ericeira World Surfing Reserve and this book a reality.

For more information about World Surfing Reserves and how to support the WSR cause, go to worldsurfingreserves.org.

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World Surfing Reserves