

# THE RING OF LIGHT

## *PART ONE: A JOURNEY OF NECESSITY*

*I. In which it will be seen that, in spite of its name, the Pacific Ocean can sometimes be angry.*

On 21 February 1911, a frightful tempest—a cyclone, to use the correct term—was raging in the Pacific Ocean east of New Zealand.

Since the day before, the blue sky had been covered by clouds, light at first, then thicker, and finally completely dark. The wind had freshened gradually; from a gale, it had become a hurricane.

The sea, rising in enormous waves, had become utterly tempestuous. Veritable liquid mountains attained a height of sixteen meters, which is only rarely surpassed. It was one of the rotating storms that are produced at during fixed seasons in certain parts of the globe, the violence of which causes the most terrible catastrophes on land as well as at sea.

And yet, in the midst of that tempest, a ship was struggling against the unleashed elements. It was a three-mastered schooner carrying the French flag.

The spars had been taken down, the boom lowered. It was tacking to port, which is to say that it was receiving the wind from the left. Its sail was reduced to a fore lateen and a triangular “bad weather sail” on its mizzen, only offering a minimal surface to the action of the wind, but the violence of the latter was so great that the ship was still moving forward. An oil-powered engine, which could have been heard throbbing but for the din of the tempest, would, in any case, have permitted it to hold its course if its sail had been torn away by the fury of the hurricane.

The ship was moving in such a way as to flee the center of the cyclone, which is, as is well-known, a redoubtable region to be avoided at all costs. All the crewmen were at their posts. On the captain’s bridge, two men were hanging on to the guard-rail, enveloped in their oilskins and sou’wester hats.

“I believe we’re at the peak of the cyclone,” said the senior officer, Captain Le Corvec, to the first mate.

“Yes, Captain,” replied the other, Lieutenant Kohfornik. “The barometer has been going down all morning, but it seems to have stopped in its descent.”

“How far has it gone down?”

“All the way to 690 millimeters, Captain.”

Le Corvec reflected. “I’ve never seen such a low, and yet I’ve been in several of these South Sea storms.” After a pause, he added: “Still, we have to keep our weather eye open.”

At that moment, the door that gave access to the deck-house opened; four people, three men and a woman, appeared in the opening, clinging to everything that came to hand in order not to be blown over.

As soon as he saw them, Le Corvec descended rapidly from the bridge.

“Go back, Madame la Marquise; go back, gentlemen,” he said to them. You’ll expose yourselves to unnecessary risks and hinder the maneuvers, already difficult. Go back—that’s an order!”

The moment that Le Corvec expressed himself with such energy and summoned his authority as captain—the “master after God” aboard the ship he commanded—the situation became serious. The passengers understood that, and were preparing to go back inside when another individual, also clinging on, appeared at the door of the deckhouse, with a napkin under his arms.

“Tea is served, Madame la Marquise!” he said, tottering.

In spite of the gravity of the situation, the four passengers could not help laughing at that announcement. But the man who had made it, losing his balance, had fallen on to the deck. He got up immediately, saying: “Oh, dear! These things only happen to me.”

And they all went back into the deck-house, the door of which the wind slammed noisily behind them.

The tempest was not slackening however; quite the contrary. The waves were becoming higher and higher. The noise of the wind blowing through the rigging had reached its paroxysm.

"I believe that we might well drink from the big cup!" said a Provençal sailor whose comrades called him "the Maucot."

"If we had some tafia, at least!" said a Breton named Guénézan. "But there's only frogs' rum, and that's weak for Christians."

"You think about nothing but drinking," said the Maucot.

"Possibly! But I believe that we might well say a prayer to the Good Mother, because, if she doesn't throw us a lifeline, we're in the process of threading our last sheet."

"Silence, you lot!" said crew-master Le Floch, in a voice that dominated the racket of the tempest.

Meanwhile, the ship was lifted up like a dinghy on the crests of immense waves. The wind did not decrease, and Le Corvec was wondering how he could get out of it without serious damage, when Guénézan, who was on watch at the starboard davit shouted: "A ship! A ship in distress!"

"Where?" said Le Corvec and Kohfornik, simultaneously.

"There, to windward of us!"

In fact, a ship appeared in the direction indicated by the sailor, disabled, its masts ripped away. Its engine could no longer be functioning, for at every pitch, its propeller appeared, motionless. On the remaining stump of a mast, a flag was dangling.

"The German flag," said Kohfornik, looking through his binoculars.

"It doesn't matter," said Le Corvec. "It's necessary to do everything humanly possible to save those people."

The captain ordered a slight change of course, and his ship was already approaching the ship in distress when a monstrous wave fell upon the unfortunate vessel. The latter was undoubtedly holed already, for it was seen to heel over on its side and sink without it being possible to get to it in time to render assistance. The passengers, alerted, had come up on deck again and watched the terrible maritime drama with anguished hearts.

The captain and crewmen bared their heads. Le Floch made the sign of the cross.

"May God receive their souls," said the old Breton. "They're doomed."

But then the voice of Guénézan was heard again. "A boat! A boat!" cried the mariner.

Binoculars searched the sea. The sailor's piercing eyes had not been deceived. A boat had survived the shipwreck. It was bobbing like a cork on the foamy crests of the waves. A man could be seen within it, waving a shred of cloth on the end of a gaffe.

"We must save that poor fellow," said Le Corvec. "Put a launch to sea."

"Captain," said Kohfornik, "that would be risking the lives of five men needlessly. Since that dinghy is afloat, let's get closer to it and try to hoist it aboard."

"You're right, Kohfornik. We're about to come within range. Have the davits extended."

The men carried out the maneuver ordered; the davits, crossbars from which boats are suspended in order to be put to sea or brought back, were turned outwards. The maneuver was carried out at the expense of countless difficulties.

"Now, look out for'ard!"

The ship approached the dinghy, moving at low speed under the impulsion of its engine. The shipwreck victim could be seen clearly, making superhuman efforts to maintain himself with the aid of a scull. An instant later, a second victim became visible, lying in the bottom of the boat, seemingly lifeless.

"Hang on!" howled Le Floch, when they arrived within earshot.

The castaway waved his arms. The ship got closer and closer. Finally, just as an enormous wave lifted up the boat to the height of the starboard rail, Guénézan and the Maucot, each skillfully handling a coiled rope, dropped it into the dinghy. The man seized one of the rope-ends and moored it to the prow of his boat. In the meantime, Kohfornik deployed the lifting-tackle destined to haul it aboard.

The shipwreck victim had understood the maneuver to be made. He hauled gently on the rope that had been thrown to him in order to come alongside the ship. Finally, he reached one of the lifting-cables, the one at the rear. He seized it, and engaged the hook in the suspension ring. Half the work was done; it was a matter of connecting the second pulley-block.

"Let me do it," said a voice with a strong southern accent; and before anyone could stop him, the heroic Maucot, seizing the second lifting-cable, had swung over the side, suspended above the furious waves. The men held on to the rope.

"Let her out!" shouted the Maucot.

Two brasses were paid out.

"Hold hard! That's it, damn it!"

In fact, the brave Provençal had succeeded in descending into the dinghy and securing the forward hook; from then on, the shipwreck victims were saved. There was no more to do than hoist the dinghy aboard and bring it to the deck. The passengers, breathless with emotion, followed the phases of the drama.

The men started hauling on the two davits. It was then that it was understood how necessary it had been for the Maucot to risk his heroic maneuver; with the aid of gaffes, he and the castaway, at the prow and the stern respectively, warded off the battering blows to which the waves would have subjected the boat by smashing against the side of the ship, which would inevitably have broken it.

Finally, it arrived level with the rail.

“Saved!” said all the watchers, with one voice.

The boat was brought on to the deck and secured. It was then possible to fetch out the second shipwreck victim, the one lying inanimate in the bottom of the dinghy.

One of the passengers leaned over the moribund man.

“Well, Doctor?” said the woman that Le Corvec had addressed as Madame la Marquise.

“He’s alive, Madame,” he said, simply.

“Take him to one of the free cabins. We’ll give him the necessary care.”

In the meantime, Le Corvec interrogated the shipwrecked sailor, in French, English and Spanish successively, but without success.”

“But my dear Le Corvec,” said one of the passengers, “since his ship was carrying the German flag, it’s in German that it’s necessary to speak to him. Being half-Alsatian, I know our enemies’ language.”

He advanced toward the sailor. “*Deutsch?*” he asked.

“*Jawohl,*” the man replied.

“That’s good,” said the passenger. “Have some warm food given to this man, and some clothes. I’ll interrogate him fully later.”

While these words were exchanged, the ship had resumed its route. The worst of the tempest appeared to have passed; the wind seemed to be slackening slightly. The clouds, tearing, allowed little chinks of blue sky to become visible through holes in their somber mass. The barometer began to climb again.

Meanwhile, Kohfornik, aided by Le Floch, took stock of the launch so miraculously snatched from certain doom. There were a few stones in the bottom of the boat, doubtless ballast. There was nothing else there except an iron box, sealed by a rope wound around it twice.

The mate undid the knot and opened the box; it was full of mineral specimens.

“A matter for study by those Messieurs,” said Le Floch, closing the box again and reknitting the rope that served to seal it. He went to take it down into the ship’s lounge.

Then life aboard resumed its normal course.

As the wind died down, Captain Le Corvec had the sails hoisted again, minimally at first, and then, gradually, in their entirety.

The spars were hoisted to their positions again the next morning. Two days after the terrible “blow,” anyone who saw the beautiful yacht, with the hull as white as its sails, would never have suspected that the lovely ship that was cleaving the blue waves of the great ocean with her prow had just escaped the very grave danger of a cyclone in the South Pacific.

## *II. In which we make the acquaintance of the yacht Coulomb, its passengers, officers and crew.*

What ship was it, then, that we have just seen struggling against one of the greatest atmospheric cataclysms and snatching two shipwreck victims from death in near-miraculous circumstances?

It was a superb yacht, displacing six hundred tons, fitted out as a three-masted schooner, with an auxiliary engine fueled by oil. Its name was *Coulomb*.

The purity of its lines, both fine and robust in form, was appropriate to provoke the admiration of connoisseurs. It progressed primarily by means of the wind, which was its principal motor; under the action of its immense sails, it could easily attain thirteen knots in a fair wind; its engine was only there in order to permit it, if need be, to overcome periods of calm or to enable it to hold its course in a tempest, as we have seen in the previous chapter.

The tricolor flag that flapped at the horn of its mizzen mast announced that it was a French ship; a starry tricolor pennant at the top of the main mast indicated that it was part of the fleet of the Yacht Club of France; and finally, there was a pennant at the top of the mizzen mast bearing two blue stars on a yellow background.

The *Coulomb* belonged to Marquis Henri de Valsorres, who was aboard with his young wife, Marquise Marie de Valsorres. She was Alsatian, the daughter of the celebrated Strasbourg industrialist Jules Kessler.

Also aboard was one of the most distinguished engineers, Paul Espéret, a former student of the *École Polytechnique*, where he had been the classmate of Marquis Henri—for the Marquis and his friend Espéret were both scientists, in the full meaning of the term. The latter had graduated in second place from that celebrated scientific academy, closely followed, a few points behind, by his friend Henri.

Both of them, after graduation, had gone on to the *École des Mines*, and, on emerging therefrom, had each handed in his resignation, for Henri possessed a large fortune inherited from his father, further augmented by his wife's, and Espéret, the son of a rich Central landowner, also had the means to devote himself freely to scientific research.

At the moment when this story begins, Henri de Valsorres was thirty-four years old, and his friend Espéret was the same age. Both had already made themselves known by brilliant work crowned by the *Académie des Sciences*. Henri specialized primarily in geology and geophysics; Espéret had devoted himself to mechanics and astronomy but they both provided evidence of the expression that science is all one, so completely did they complement one another. For Espéret, Henri was the necessary collaborator—and vice versa, as one says in geometrical demonstrations.

The problem of the most complete utilization of the forces of nature, that of the conquest of space, preoccupied them both equally.

"You'll see," Espéret had said to his friend one day, "that humans will eventually be able to visit the worlds that gravitate in the heavens around the sun that illuminates them."

"Yes, I certainly believe so," Henri replied, "but what a prodigious force will be necessary to animate the vehicle destined to carry out that improbable voyage!"

"It will certainly require a powerful accumulator of energy. And where can that accumulator be found? Where can one even search for it?"

"Patience," said the Marquis. "The terrestrial crust has not yet delivered all its secrets. It contains substances like radium, which we have only known for a short time; perhaps it imprisons others even more energetic beneath the superimposed strata that constitute it."

"Perhaps, indeed."

"Let's study, then, old man, swotting relentlessly. You'll see that we'll get there."

And Henri de Valsorres, with the aim of "swotting," as he said familiarly to his inseparable companion, had ordered the construction, two years before, of the yacht aboard which we see them today, in accordance with his own plans and personal ideas.

In fact, if the ship resembled, in its external features, all ships of the same type, it offered particularities that might have appeared strange to a specialist. Thus, all the hawsers, and all the "dormant equipment," instead of being made of steel cable, as on all modern ships, were made of phosphor-bronze threads. The anchors and their chains were also bronze, hardened by a special alloy. It was the same with the windlasses installed at the foot of each mast in order to hoist the sails. The axle of the propeller and the propeller itself were bronze. The engine, an internal combustion engine running on heavy oil—fuel oil, as they say nowadays—was entirely made of bronze, compressed by a special punch. All the pegs, braces and bolts of the hull were similarly made of the same phosphor-bronze. The hull itself, like that of modern ships, was entirely made of teak.

Captain Le Corvec, an old Breton long-haul captain, who commanded the ship, and had supervised its construction in a celebrated shipyard in Paimpol, could have affirmed that, except for the blades of the crewmen's and passengers' knives, not single piece of iron or steel had entered into the construction of the magnificent yacht, which Valsorres had named *Coulomb* in honor of the French scientist of genius who, during the reign of Louis XVI, had first discovered the fundamental laws of electricity.

Such was the vessel, simultaneously elegant, powerful and curious.

Its total length was fifty-two meters, with a breadth of eighty meters fifty, and a draw of three meters seventy. As we have said, it displaced six hundred tons, and it could make thirteen knots by sail and eight knots under its four-hundred-and-fifty-horsepower engine.

On the deck between the masts were two constructions—deck-houses, to use the maritime term. One contained a small lounge, the stairway to the interior of the ship, and a vast room, a veritable laboratory, in which instruments of all sorts could be seen: electrometers, magnetometers, compasses, sextants, chronometers, and a wireless telegraphy receiver. It was there that Valsorres and Espéret spent almost all their time. The other contained the galley, the larder and the large dining-room.

Although the scientific installations had been made with particularly care aboard the *Coulomb*, that did not mean that the comfort of the passengers had been neglected. On the contrary, all that the most refined luxury can imagine to render life aboard a ship agreeable had been combined in the installation of the cabins.

The cabins of the Marquis and the Marquise, separated by a dressing-room and a bathroom, occupied four meters of the length and the entire breadth of the ship, immediately in front of the engines. Then came a vast lounge, artistically furnished, with rare engravings ornamenting the walls; glass cases enclosed precious works of art, secured by frames in order not to be displaced by the pitching of the vessel. A superb grand piano occupied one of the corners of the large room, which gave rise to the supposition that music was in honor among the passengers of the *Coulomb*.

Beyond the lounge was a broad corridor giving access to six cabins, with two bathrooms. One of them was occupied by the Marquise's chambermaid, Catherine, a beautiful young woman, Alsatian like her mistress, upon whom the chief engineer, the taciturn Breton Le Bris, looked with the most sympathetic eye. Another was Espéret's room; needless to say, it contained a profusion of books and scientific instruments of every sort.

A third was occupied by a passenger that we only glimpsed in the course of the story of the tempest, a young physician full of merit, Dr. Portier, the son of the late physiologist of the same name, a member of the Académie des Sciences, and himself a very distinguished scientist, already known for fine research on anaphylaxis. Dr. Portier, a friend of the family, had joined the *Coulomb* in Auckland, in New Zealand, and had embarked two days before the terrible cyclone of which we have told the story.

To complete the passenger list, it is now necessary to introduce Thomas. Who was Thomas? He was a worthy fellow, the engineer Espéret's valet, who was as devoted to him as a dog to its master. Valsorres had taken him aboard the *Coulomb*, where he combined the functions of valet with those of butler. Thirty-six years old, very robust in constitution, never suffering from seasickness, always in a good humor, he was a type specimen of the perfect domestic. He served at table with Catherine, whose solid stomach was equally insensible to the pitching and rolling of the ship.

Behind the engine-room were the cabins of the officers, the captain, Le Corvec, and his first mate Kohfornik, a "Breton's Breton," a native of the Île d'Arz in the gulf of Morbihan, who had sailed all the seas of the globe. Two engineers, Le Bris and Kermoisan, completed the general staff. Those four officers took their meals in a large ward-room, around which their cabins were grouped.

Finally, there was the forward "post" where the eighteen crewmen slept; two cabins adjacent to the post sheltered the crew-master Le Floch, an old mariner from Douarnenez, and the ship's cook. All the mariners were seasoned men; with the exception of le Maucot, all of them were originally from Finistère or Morbihan, and the Marquis de Valsorres could say that he had an elite crew. Those admirable mariners have, in any case, just given fine proof of their intrepidity and their composure during the tempest.

The reader is now acquainted with the yacht and its personnel.