## Chapter I

All the people in the world who are preoccupied with the great scientific movement of the present century are familiar with the name of Arthème Charmillon, a member of the Académie des Sciences. That knowledgeable professor had obtained an imperishable renown thanks to his studies in geology, meteorology and, above all on the natural history of the early ages of the world.

Paleontology, the marvelous science that is concerned with fossilized organisms—which is to say, those buried in the various layers that surround the composition of the terrestrial crust, has no secrets from him. His latest work, *The Absorption of Heat in Space*, although concerned with studies different from those that earned him his reputation, would have sufficed to classify him among the primary physicists of our era if that place had not already been acquired by his previous works.

On 8 July 1876 Monsieur Charmillon, of the Institut, occupied a modest apartment in Paris at no. 30, Rue de Fleurus, not far from the beautiful Luxembourg park.

He was sitting in his study in front of a blazing fire; his mind seemed to be absorbed by profound reflections. Suddenly, he pushed away the books and scientific journals open in front of him with an abrupt gesture, rose to his feet, paced back and forth briefly, and then, with an urgency that one would not have expected in a man of his age and knowledge, used his fist to strike polished steel bell placed on his desk.

"No, no," he exclaimed, responding to his internal thought, "it can't be! It shan't be! For myself, I'll oppose it so long as there's a breath of life in me."

A valet in livery answered the appeal and came with a grave and silent step to stand before the Academician, and then bowed, indicating that he was awaiting his master's orders.

"What is Mademoiselle Angèle, my niece, doing at this moment, Jean-Pierre?" asked Monsieur Charmillon.

"Mademoiselle Angèle," Jean-Pierre replied, "is in the dining room inspecting the linen that the laundress has brought."

"Tell her to come as soon as she can," commanded Monsieur Charmillon. "I have to talk to her."

"Very good," replied the valet, with comic emphasis. "Monsieur's orders will be followed punctually." And he left the room at a measured pace, striving to assume the compassed gravity that distinguishes the servants of aristocratic houses.

When Monsieur Charmillon was alone, he put his head in his hands and commenced a monologue in a low voice, as provincial actors do when rehearsing their roles as they march hastily through the streets.

"I'm crazy," he said, "To worry like this. There's nothing in Angèle's behavior to make me believe that she has ever had the fatal thought of marrying. The poor child is entirely absorbed by the cares of the household. Besides which, she loves me enough never to consent to causing me a voluntary chagrin. She knows what a profound horror I've professed throughout my life for what the majority of people call the sacred bond of marriage! It's all right! When she comes, I'll try to find out, adroitly, what her intimate thoughts are, and whether she's secretly nurturing any matrimonial tendency—which I shall hasten to combat with invincible arguments."

Reassured by his reflections, Monsieur Charmillon returned to his cherished work.

What Jean-Pierre had not mentioned to his master was that Angèle was not alone in the dining room.

Sitting next to her was a young man, who was watching her while she unfolded tablecloths and napkins, spread them out on the table, examined them minutely and then folded them up again. They were engaged in a very animated conversation, and they both appeared to be taking such a lively interest in it that they had not perceived either the ringing of the scientist's bell at the entrance into the dining room of the pompous Jean-Pierre.

"Oh, Mademoiselle," said the young man, "if you knew how painful it is for me to live so close to you in this state of perpetual embarrassment. I love you, and you have been kind enough to tell me that my sentiments do not offend you in the least. Like you, I belong to an honorable family; I have made my family party to my projects and my hopes. My father and my mother would be happy to see me marry the

niece of the illustrious scientist who has been kind enough to facilitate my first steps in the world of scholarship, and to whom I owe the entirety of my first successes."

The young woman listened, while seemingly busy; it was easy to see that she was taking a very keen interest in what the young man was saying.

"I'm not exactly rich," the young man went on, "but the small inheritance that my Uncle Jolibois left me can now assure us a little comfort. You know, in any case, how much I like scientific work, and your uncle says himself to anyone who cares to listen that I have the right to count on a bright future. What serious objection can he have, then, to our marriage, since you consent to it? Come on, Mademoiselle, I'm asking you?"

The lovely Angèle raised her head, turned her beautiful eyes toward the young man, and smiled at him.

"If my uncle were to consult me," she said, in the most tender tone of voice, "I know what I would advise him to do and what reply I'd like him to make to you, but I've already told you several times that, unfortunately, he has never consented to acquire the habit of asking my opinion, and that he already has a fully-formed and very definite position on the subject in question."

"Personally, Mademoiselle, I believe that you're exaggerating the difficulties and that you ought to take your uncle to task for what is perhaps no more than a capricious whim on his part. Monsieur Charmillon has always shown me an almost paternal affection, and he professes an unequaled amity for you. If you would like to be amiable and follow my advice, you'll go to your uncle's study and, after having cajoled him with the grace of which no woman has ever possessed as much as you, you'll tell him our projects and dreams for the future frankly, and let him know that our entire happiness depends on a single word falling from his lips."

"Ta ta ta! That's your imagination taking flight. Have you forgotten, then, the profound horror that Monsieur Charmillon professes for marriage? If I say a single word to him about our hopes, he'll become crimson with anger and throw his secretary, Monsieur Émile Colin, out of the house without further ado, and all we'd have gained would be a separation that might perhaps be permanent, never to see one another again."

"Oh, this situation is unbearable!" cried the young man, whose eyes had filled with tears. "I dread that he'll make us renounce definitively the realization of our beautiful dreams of future happiness!"

"Come on, Monsieur Émile," said the young woman, in her most caressant voice. "Don't be dejected like that, for you'll take all my courage away. Do as I do, and arm yourself with patience. My uncle might change his opinion some day. In the meantime, we have the pleasure of living side by side, of seeing one another at any hour of the day. You tell me repeatedly that I please you. You can see that I'm not playing the coquette with you, and have never shown any sign of doubting your sincerity. For my part, I confess that your quest is not indifferent to me. If fate and my uncle's caprice permit me to marry, I don't want any husband but you; I'll even promise you, if it will give you any pleasure, that I'll never have anyone else."

"So, you refuse to talk to Monsieur Charmillon?" asked the unhappy young man, firmly.

"As to that, yes; I refuse absolutely, because I consider that step to be essentially imprudent."

"It will be me that does it, then, for I'd prefer anything to the false situation in which the two of us are obliged to live. I'll speak this very evening to the uncle you believe to be so terrible."

The quarrel between the two young people was perhaps about to take on new proportions, when the valet Jean-Pierre reappeared and said to Angèle: "Monsieur Charmillon would like to speak to Mademoiselle as soon as possible."

"Very well! I'll hurry," said the young woman. "Au revoir, Monsieur Émile-and no imprudence!"

"Au revoir, Mademoiselle. I repeat that I've decided to speak. I owe that to the loyalty with which your uncle has welcomed me into his home."

"Do as you wish, stubborn wretch," said Angèle sadly, "but may it please God that we don't have cause to regret your impatience."

She left the room as she was speaking.

When she went into her uncle's study, Monsieur Charmillon was sitting by the fire again. He indicated an armchair that he had placed next to his own. "Sit there, my dear," he said.

Angèle obeyed, sitting down beside the scientist without saying a word and looking at him with an interrogative expression.

"Angèle, I have something very serious to say to you," the Academician began, emphasizing his syllables, as he was accustomed to do in his teaching and in public lectures when he wanted to make a particular appeal to the attention of his listeners.

The young woman's heart began to beat violently, for it seemed to her that her terrible uncle must know something. She remained silent, however, and listened.

"I've just received a letter," Monsieur Charmillon went on, without seeing his niece's emotion. "It's a message from the Institut that threatens to bring considerable trouble into our peaceful dwelling."

Angèle sighed, and felt relieved. "I'm listening, Uncle," she said.

"You know—or rather, you don't know, because it's the lot of women to stagnate in ignorance—that a celestial phenomenon of great importance is to occur in a few months. The planet Mercury, which, with Venus, forms the group of interior planets, is to pass in front of the sun. That will be a scientific solemnity of all the more importance because it happens so rarely."<sup>1</sup>

Angèle opened her eyes wide and wondered what the planet Mercury could possibly have to do with a disruption of the family installed in the small apartment on the Rue de Fleurus.

The savant member of the Institut continued: "This interesting phenomenon will, unfortunately, only be visible from the southern hemisphere; all the scientists in the world have resolved nevertheless not to allow an event to pass unstudied that might permit the further rectification the calculations recently made in a similar circumstance. You know—or rather, you don't—that when Venus passed in front of the sun recently, the most illustrious scientists in all Europe went to distant seas to witness the spectacle, and brought back precious observations. Thanks to their studies, and the calculations made in consequence, we have been able to measure in a much more accurate fashion than had previously been possible the distance that separates us from the sun and the diameter of the star. You can therefore appreciate the importance of such an event. One shivers when one thinks that before the last transit of Venus an important error was committed on that subject, and that we would still be plunged in gross ignorance if valiant observers had not abandoned their hearths, their families and their cherished studies to travel thousands of leagues, in peril of their lives, to direct their gazes through powerful telescopes.

"These details seem tedious to you, my niece, because you can't grasp heir importance, but don't be impatient—I'm getting to the mater that concerns us more directly, and you'll lose nothing by waiting."

The lovely Angèle uttered a sigh of relief, and redoubled her attention.

"A national expedition has been organized," Monsieur Charmillon continued. "It intends to go into the glacial southern seas to witness the fine spectacle that nature promises us. Special credit has been voted by various governments in order to facilitate the scientific mission. Each nation has nominated delegates from among its scientists who will take part in it. The expedition will not only consist of astronomers and mathematicians; all the branches of science will be represented in the unprecedented enterprise: naturalists, geographers, microscopists, physicists and geologists have been designated to take part and...."

"And?" said Angèle, on seeing her uncle hesitate.

"And it's your uncle, Arthème Charmillon, who will have the honor of representing France in that glorious enterprise; it's your uncle who is charged with making special studies of the geology and paleontology of the regions that we're going to visit."

"What, my dear Uncle! You've consented to expatriate yourself at your age? You're leaving your house, your pupils, your work, your cherished studies, and your unfortunate niece?"

"Stop there!" said the scientist. "That's why I summoned you, and what I want to talk to you about. You know what a great affection I have for you, but you also know what my well-determined ideas are

<sup>&</sup>lt;sup>1</sup> In fact, transits of Mercury are more frequent than transits of Venus because Mercury is closer to the Sun; they occur approximately once every eight years, at irregular intervals.

about marriage. You'll be my heir—that goes without saying, since I have no other relatives but you in the world—but never, so long as I live, will I allow you to contract the ridiculous and odious contract that delivers a slave to a master. I'm a sworn enemy of the trade in Africans, and I have no more sympathy for the trading of white people. So long as I live, you'll remain a spinster."

"However, Uncle...," Angèle timidly ventured to say.

"No, no—no however!" the scientist interrupted, with a juvenile impetuosity. You'll coif Saint Catherine;<sup>2</sup> that will be better for you than making yourself the servant of some man before becoming his nurse. You'll remain a spinster—that's my wish!"

In his naïve egotism, the unfortunate scientist had no suspicion that the depiction of marriage and its defects that he painted with so much ardor to his niece was a faithful representation of the life that she was condemned to live with him.

As for the young woman, she understood that there was no way to tackle such an obstinate position head on; she contented herself with sighing, and said, resignedly: "Go on, Uncle; I'm listening."

"It's only the determined resolution I've made not to leave you for a moment that has made me hesitate to accept the glorious position that my colleagues at the Institut have offered me. I would never decide to leave you alone in Paris; you can't live apart from your uncle, who watches over you and loves you like a father."

"So, my worthy uncle," said Angèle clapping her hands, "you've refused and you're staying!"

"No," retorted the Academician, swiftly. "I've accepted gladly, and we're going."

"What? We're going? Oh, no—certainly not!" said the young woman, rebelling. "I can assure you, Uncle, that I have no vocation for distant peregrinations, and that, in spite of the keen chagrin that I'll feel in being separated from you, if you insist on going, I insist on staying."

"Come, come—calm down," said Monsieur Charmillon, who perceived, too late, that he had been unskillful, and that he was running the risk of colliding with a firm determination.

"But Uncle, it's an indignity that you're proposing to me!" cried the young woman, dissolving in tears.

"Good! Now she's crying! Come on, my dear Angèle," he added, softening his voice like a caress. "You mustn't get do upset. Nothing's happened yet, damn it! We haven't gone. If you persist in refusing to go with me, I'll stay, very regretfully, and I'll content myself with letting our poor Émile go, whom I can't honestly deprive of this unique opportunity to make a reputation in the world of science."

At these words, Angèle opened her ears wide; had she not been a daughter of Eve she would doubtless have given herself away; even so, she went as red as a cherry, and anyone else but the old scientist would have been struck by the sharp emotion that had just colored her florid cheeks. She succeeded, however, in mastering herself, wiped away her tears, and said, in a tone she tried to render indifferent:

"My poor Uncle, how good you are, and how unworthy I am to possess such affection! I'm going to deprive you of a pleasure, perhaps the greatest of your life."

"What do you expect? My dear child, it's not our fault that nature has made you a woman. To say 'woman' is to say weak, pusillanimous and cowardly."

On that subject, Monsieur Charmillon, who was not prone to gallantry, had an entire chaplet to tell. His niece, who would not have been hearing the diatribe against her sex for the first time, interrupted him.

"What grieves me, Uncle," she said, "is depriving you of the glory that you promised yourself, and would have crowned your brilliant career so well."

"It's a pity, no doubt," said the scientist, "but after all, the glory that escapes me will be collected by dear Émile. He'll become famous, and as no one is unaware that he's my pupil, the studies and observations that he'll have made will reflect well on me. He'll owe you a considerable illumination, my lovely niece, for after all, as my secretary, he would doubtless have been put in the light, but he'll be

 $<sup>^{2}</sup>$  Young women in France were said to "coiffe Sainte Cathérine"—the virgin martyr adopted as the symbol of purity—when they reached the age of twenty-five, after which they were considered to be, as the English phrase puts it, "on the shelf" for good.

much more so when I've confided my own mission to him, and he won't be with his master, who would surely have collected the finest fruits of his endeavors."

"Even if you went, then," asked Angèle, "you'd take Monsieur Émile?"

"Of course! How could I do without him? Isn't he up to date with all my work? Who else could possibly replace him?"

The young woman reflected momentarily, and, increasingly convinced that she had just made a blunder, thought about operating a skillful reversal of direction.

"Uncle," she asked, "is it really very far away that your expedition is going?"

"Is it far? Nearly ten thousand leagues from our homeland, unless it's eleven, or even twelve."

"Is it a beautiful country where you'll be making your observations?"

"Some solitary rock in the middle of the sea, in a glacial climate, far from any inhabited land."

"It's singular, my dear Uncle, how much what you're saying excites my curiosity."

"Oh, the most difficult curiosity would have had plenty to satisfy it. First of all, there'll have been a long crossing during which all zones and all climates would have been visited. Moreover, we'd have had a magnificent ship, comfortably fitted out. On arrival, we'd have been able to study the disrupted terrains of volcanic islands, and the flora and fauna of the glacial seas—which is to say, mosses and lichens, all different from the vegetation of our country; no trees, almost no vegetation; seals and whales, and perhaps white bears. Everywhere, we have had before us solitude and the unknown!"

"Do you know, Uncle, that the picture you've jut painted is full of seductions? I almost regret having turned you away from making the voyage, and it wouldn't take much for me to decide to go with you. My dear Uncle's glory is dearer to my heart than I thought."

"My dear, dear child," murmured the old Academician, in a tender tone.

"You'll go, then—and you'll take me with you! Is it agreed?"

"No, no, my poor dear. It's only now that I understand how odiously egotistical my project was. No, I won't make you freeze amid the ice-sheets and the icebergs. No, I won't expose your beauty and youth to the perilous hazards of such a long voyage. My decision is made, my dear Angèle; you see me resigned, and we'll stay. Émile will depart alone. To him, the glory to be acquired! It's time I'd stepped side to make way for the younger generation."

The clever fly found herself caught in the web that she had spun herself, but she was woman enough not to abandon the game, and rapidly found a second string for her bow.

"I'd almost regret the decision you've made," she said, in the most ingenuous tone in the world, "if our dwelling hadn't become more agreeable since that English family came to live opposite. Have you noticed, Uncle, how pretty the young Misses are who play on the balcony? And their big brother is so funny that I can't think about him without dying laughing. From morning to evening he's behind a curtain watching my movements, and...."

"What! That young man has dared...?

"Oh, Uncle, it's not as bad as that! Doubtless he finds me to his taste, and he's not obliged to be aware of the extraordinary ideas you have about marriage. Anyway, the English people belong to a great family, and I know that the young Monsieur will be very rich one day."

"And how do you know that, you little rogue?" said the scientist, all of whose blood had frozen in his veins.

"Oh, my God, it's quite simple," she replied, without showing the slightest emotion. "I asked the chambermaid." And she added, as if to herself: "All the same, it's a pity that you have such a profound aversion to marriage, for he's very good-looking, the young Englishman."

Uncle Arthème Charmillon pressed his bald head between his hands momentarily. He sensed the redoubtable abyss hollowing out beneath his feet. He reflected momentarily.

"On due reflection," he said, finally, "Since you'll consent to go with me, we'll go together to observe the passage of Mercury across the Sun." In a more caressant voice, he went on: "Angèle, go and tell dear Émile that I need to see him. Above all, don't tell him about our departure; I want to enjoy his pleasure and surprise when I announce that I've obtained an authorization to take him with me, and enable him to share the glory of my future discoveries."

The young woman did not need the request to be repeated, and departed with the agility of a frightened hind.

As soon as she was out of her uncle's sight. She said to herself, with a huge sigh of relief: "That was a narrow squeak!"