SPARKS AND TREMORS

A Novel

BY

Sloane Merritt

Mount Cassin · The Observatory

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CHAPTER

1

The door opens and I do not look up from the data. I have been expecting the Holloway team since seven and it is already seven forty and Mount Cassin does not care about anyone's travel delays.

"Dr. Merritt."

I look up.

He is not what I expected.

"Garrett Holloway." He sets his case on the table without asking if that is acceptable. "Your caldera vent readings for October are wrong."

He has been here eleven seconds.

"They are not wrong," I say. "They are inconvenient. There is a difference. Sit down, Dr. Holloway. The mountain has been waiting longer than either of us."

He almost smiles. Almost.

He pulls the October data and spreads it across the table like he owns the table. Roy catches my eye from the doorway and raises both eyebrows.

I know, Roy. I see it too.

"Your thermal gradient assumptions are based on the August baseline," Garrett says. "August was anomalous. You cannot build an October model on an anomalous baseline."

He is not wrong.

"I am aware of the August anomaly," I say. "Which is why I ran three independent baseline corrections before finalizing the October readings. Did you read the methodology appendix or just the summary?"

He pauses.

Good. Read the whole document next time.

Tom Ashford, who arrived behind Garrett and has been quietly setting up equipment in the corner, clears his throat.

"She's got you there," Tom says.

I like Tom Ashford.

Garrett does not look at Tom. He is looking at me with an expression I cannot fully read and I read terrain better than most people read words.

Recalculating. He is recalculating.

"The methodology appendix is thorough," he says finally. "I retract the objection. The October readings stand."

"Thank you," I say. "Now. The caldera vents. Your institution's model and mine disagree on the pressure source. That is the

conversation we are actually here to have."

And now he is interested. Now we are getting somewhere.

We work through the caldera vent data for two hours without stopping. Petra brings coffee and sets mine down without interrupting because Petra has worked with me for four years and knows exactly when not to speak.

Garrett notices that. He notices everything.

"Your pressure source model puts the origin at twelve kilometers depth," he says. "Mine puts it at nine. We cannot both be right."

"We cannot," I agree. "Which means one of us has better data or one of us has a better model. Possibly both."

I want it to be me. I also want to keep talking to him indefinitely and that is a separate and inconvenient fact.

"Then we run both models against the November readings when they come in," he says. "Whoever fits better owns the interpretation."

"Agreed," I say.

At four o'clock Deb appears in the doorway with the look she reserves for things that cannot wait.

"Sloane. Cassin is moving. Roy needs you in the monitoring room."

Of course it is.

Garrett is already reaching for his jacket.

"Dr. Holloway," I say. "How do you feel about skipping the hotel check-in."

He is already standing.

The monitoring room is loud and fast and Roy is calling readings while Marco pulls up the seismic array and Petra is already on the phone with the federal reporting line.

Garrett steps up to the secondary display without being asked and starts running comparative analysis against his institution's Pacific Rim dataset.

He just made himself useful without being invited. Without being told where to stand or what to pull. He read the room and filled the gap.

"Magnitude 2.8," Roy calls. "Depth eleven kilometers. Cassin north flank."

"Consistent with the pressure migration pattern in the October data," Garrett says quietly. To me. Not to the room.

He just validated my October readings in the middle of a live seismic event without making it a moment.

"Yes," I say. "It is."

Spark. I like this guy.

CHAPTER

2

Everyone else leaves at six. I stay because Mount Cassin's November readings came in at five fifty-seven and I am not going home with fresh data sitting unprocessed on my desk.

Garrett stays because Garrett stays.

I do not ask him why. I already know.

"November confirms your depth model," he says, pulling up the array without being asked. "Twelve kilometers. Not nine. You were right."

"I know," I say.

I have known since this morning. I waited to see if he would say it first.

"You knew this morning," he says.

"Yes."

He almost smiles again. This time he finishes it.

Petra appears in the doorway in her coat with her bag on her shoulder and looks at the two of us at the data table and looks at the

ceiling and looks back at me.

"I'm going home, Sloane."

"Goodnight, Petra."

"Roy already left. Marco already left. Tom already left." She pauses. "Just noting that for the record."

Petra. Please.

"Goodnight, Petra," I say again.

She leaves. The building goes quiet in the way that buildings go quiet when everyone except two people has gone home for the evening.

I am aware of that. I am choosing not to make it a thing.

We work through the November data for an hour. Then Garrett closes his laptop and looks at me directly in the way that means the science portion of the evening has concluded.

Here it is.

"Have you eaten," he says.

"I had coffee at two."

"That is not eating." He stands. "There is a place two blocks from here that Deb recommended this morning. She said — and I am quoting directly — tell Dr. Holloway that if he does not take Dr. Merritt to dinner I will be very disappointed in him."

Deb. I did not know Deb had opinions about this.

I am going to have to reassess Deb.

The restaurant is small and warm and the November rain is doing something aggressive to the windows. Garrett orders without looking at the menu which means he has been here before or he is the kind of person who decides quickly and does not second guess the decision.

I want to know which one.

"You've been here before," I say.

"First time. I read the menu online this afternoon." He looks up. "I had forty minutes between the monitoring event and the November data drop. I used them efficiently."

He used them to find a restaurant to take me to. In the middle of a live seismic event response.

I do not know what to do with that.

"That is either very organized or very presumptuous," I say.

"Both," he says. "I contain multitudes."

We are on the second coffee when he asks the question I have been aware was coming since we closed the laptops.

"What does the next fifteen years look like for you. Not the company. Not Cassin. You."

There it is.

One of them is what he asked.

I know which one I want to answer.

"I want the science," I say. "I will always want the science. But I am thirty-four with a biological clock ticking and I watch that mountain

every day and it reminds me constantly that nothing lasts indefinitely and I have been putting the personal version of my life on hold for three years waiting for the timing to cooperate."

That is more than I planned to say.

"The timing does not cooperate," Garrett says. "In my experience it never cooperates. You have to build what you want in the middle of the inconvenience."

"Is that what you are doing," I say. "Right now. In the middle of the inconvenience."

He looks at me across the table in the small warm restaurant while the rain makes its case against the windows.

"Yes," he says. "That is exactly what I am doing."

The fire is burning.

CHAPTER

3

We have plans. Actual plans. Garrett asked on Wednesday, I said yes on Wednesday, and for two days I have been trying to figure out if I am capable of sitting across a dinner table from a man I cannot stop thinking about without turning it into a data review.

At six fifty-three Thursday morning Mount Cassin registers a magnitude 3.4.

Of course it does.

My phone goes at six fifty-four. Roy. Then Petra. Then the federal reporting line automated alert. Then Garrett.

"I saw it," he says before I can speak.

"I know you saw it," I say. "How fast can you get here."

The monitoring room is full by seven thirty. Roy has the seismic array up across three displays. Marco is pulling the thermal imaging from the caldera vent sensors. Petra is on the federal line.

Garrett arrives at seven forty-two with Tom and two laptops and goes directly to the secondary display without stopping at the coffee station which tells me he has been awake since before my call.

He came straight here. No hotel coffee. No detour.

"Depth is shifting," he says, pulling up his institution's comparative data. "Eleven point four kilometers at oh-six-fifty. Eleven point one at oh-seven-twenty. It is moving up."

"I see it," I say. "Roy, get me the August migration pattern. I want to compare the ascent rate."

We are doing this together. That was always going to be tonight's plan. The mountain just moved it to this morning.

By noon the event has stabilized at a 3.6 and the depth migration has paused at ten point eight kilometers. Not an emergency. Not nothing either.

Petra pulls me into the hallway with the expression she uses when she has something to say that she does not want the room to hear.

"Your dinner reservation is at seven," she says.

"I know when my reservation is, Petra."

"Cassin is stable. Roy can run the afternoon monitoring. Marco can cover the evening array." She crosses her arms. "You are allowed to leave the building, Sloane. The mountain will still be here tomorrow."

She is not wrong. She is also enjoying this more than is strictly necessary.

At three o'clock Garrett finds me at my desk running the ascent rate comparison against the August data.

"The afternoon array is stable," he says. "Roy has it."

"I know Roy has it."

"Tom has the comparative dataset running on the secondary display. He does not need me for the next four hours." He sits down across from me. "I still want to have dinner with you tonight. The mountain had this morning. Tonight is ours if you want it."

I have wanted it since Wednesday. I have wanted it since the restaurant in the rain when he said he was building what he wanted in the middle of the inconvenience.

"Seven o'clock," I say. "I will meet you in the lobby."

At five forty-five the depth reading moves again. Ten point eight to ten point five. Small. Steady. Purposeful.

Roy appears in my doorway. "It's probably nothing. Probably a pressure adjustment after this morning's event. I can run the evening array. That is what I am here for."

Here is the thing about ten point five. It is not ten point two. Roy is right that it is probably nothing. But probably nothing and definitely nothing are not the same reading and I have built this entire company on the difference between those two things.

I can stay. The data is right here and I know exactly what I am looking at and staying is the version of tonight where nothing surprises me.

Or I can go to dinner and be a person for two hours and trust that Roy will call me if the mountain decides to make probably nothing into definitely something.

I built this team. I trained these people. Roy has never missed a ten point two in four years.

The question is not whether I trust Roy. The question is whether I trust myself to sit across from Garrett Holloway for two hours without one eye on my phone.

I do not know the answer to that.

"Roy," I say. "Call me if the depth crosses ten point two. Not ten point four. Ten point two."

"Ten point two," he says. "Go have dinner, Sloane."

I find Garrett in the lobby at six fifty-eight. He is in a jacket that is not his field jacket and he has done something different with the day's work that I cannot precisely identify but notice anyway.

He got ready. He actually got ready for tonight.

"The mountain moved again at five forty-five," I say.

"I know. Tom texted me." He holds the door. "Roy has it."

"Roy has it," I agree.

The restaurant is warm and the food is good and Garrett is across the table and I am — almost — entirely present. We talk about his first field deployment in Iceland. The reason I started this company. Whether volcanologists and seismologists should be allowed to collaborate without supervision.

At ten forty-three my phone lights up on the table.

Roy. Depth at ten point three. Holding. Not crossing. Just want you to know.

I look at it. I look at Garrett.

I show him the phone.

He reads it. Looks at me. Reads it again.

"Roy says holding," he says.

"Roy says holding," I say.

He looks at me for one more second. Then he signals for the check.

We go back together. Not because the mountain demanded it. We go back because that is who we both are and we just found that out about each other at ten forty-three over a dinner we did not finish.

Roy looks up when we walk in.

"Ten point three," he says. "Still holding."

"I know," I say. "We will take it from here."

Roy puts on his coat and goes home.

Garrett pulls up the secondary display.

This is what I wanted. Not the dinner specifically. This.

CHAPTER

4

Saturday was Garrett's idea. Not the office. Not the mountain. Not the data. A Saturday in the city — the botanical gardens in the morning, lunch somewhere without a seismic array on the wall, an afternoon that belongs to nobody except us.

I have been looking forward to it since Tuesday. I have also been trying not to think too carefully about why.

At seven twelve Saturday morning the Ridgeback Fault registers a micro-swarm.

Not Cassin. Ridgeback. The one that runs under the city.

Eleven events in forty minutes. Magnitude 1.2 to 2.1. Nothing that would wake a sleeping resident. Everything that would wake me.

Roy calls at seven fifteen. "Micro-swarm on Ridgeback. Eleven events. I have the array up."

"I see it. Keep logging. I want event spacing and depth consistency across all eleven."

I am already at my laptop in my kitchen in my Saturday clothes which are not my field clothes and not my office clothes and which I

picked out last night like a person who has a life outside this work.

I am not changing. I am handling this from here and I am not changing.

Garrett texts at seven twenty-two. Ridgeback. I saw it. How are you reading it.

He was already watching. Of course he was already watching.

By eight o'clock I have the depth consistency profile and it is not what I want it to be. The events are shallow. Four point two to five point eight kilometers. Shallow means the fault is active in the upper crust which means the city infrastructure is in the conversation.

My phone rings. Not Roy. Not Garrett. The city emergency management office.

"Dr. Merritt. We are convening an emergency technical briefing at ten o'clock. We need your Ridgeback assessment on record before we make any public statement."

I am also supposed to be at the botanical gardens in two hours.

"I will be there at ten," I say.

I call Garrett at eight thirty.

"The city briefing is at ten," I say. "I have to go. I am the only independent scientific voice they have on Ridgeback and if I am not in that room the public statement will be written by a city administrator who last studied geology in 1987."

"I know," he says. "I want to come with you."

He wants to come.

"It is not your fault system," I say. "You are a volcanologist. Ridgeback is a strike-slip fault. This is outside your collaboration scope."

"Sloane." His voice is very even. "I am a seismologist first. And you should not walk into a city emergency briefing without backup. Let me come."

He is right. And he wants to be there. For me. Not for the science.

The briefing runs two hours. Garrett sits beside me at the technical table and when the city administrator tries to reframe my depth assessment as less significant than it is Garrett produces his institution's Pacific Rim shallow fault data and lays it on the table without being asked.

He just backed me in a room full of city officials with his own institution's data. Nobody asked him to do that. He just did it.

Afterward on the steps Petra calls. "How did it go. Are you still getting your Saturday."

It is twelve forty. The botanical gardens close at four.

I can call it. The briefing was real and the morning was real and letting the day end here is the reasonable and professional response to what just happened.

Or I can stand on these steps and admit that what Garrett just did in that room has nothing to do with the botanical gardens and everything to do with the question I have been not asking myself since Wednesday.

I can keep this professional. I am good at professional. Professional has never left me standing on city hall steps wondering if a man who reads Pacific Rim fault data the way I read Ridgeback data is the most dangerous thing that has ever happened to me.

Or I can admit that the botanical gardens were never the point.

"We have three hours," I say to Garrett on the steps.

"Three hours is enough," he says.

We skip the botanical gardens. There is a park six blocks from the city offices with a path along the river and a coffee cart that is still open and November doing its best against a pale sky.

We walk for two hours and twenty minutes. We talk about Ridgeback and then we stop talking about Ridgeback and we talk about everything else. His first field deployment in Iceland. The reason I started this company. Whether the city administrator's 1987 geology professor would be horrified by today's performance.

With forty minutes left Garrett stops walking and looks at me.

"Same time next Saturday," he says. "Whatever the mountain does. Whatever the fault does. Same time."

I am standing on a path above a fault system that moved this morning under a city of half a million people and I am thirty-four with a biological clock ticking and I just watched this man walk into a room and lay his data on the table for me without being asked.

"Same time," I say.

The fire does not require ideal conditions. It just requires fuel. I am starting to think I am the fuel.

CHAPTER

5

Brock calls me into his office on Friday morning with the expression he uses when he has decided something and wants me to feel like I was consulted.

"The institutional review is Sunday," he says. "Garrett's department head is flying in. Diane Rell. She wants a full collaboration assessment — data sharing protocols, publication agreements, joint funding structures. The works."

Sunday.

Garrett and I have Saturday and Sunday this week. Two days. The first two consecutive days we have managed to protect since the collaboration began.

"Sunday," I say.

"Sunday," Brock says. "I know you had plans. The company comes first, Sloane. You know that."

I know that. I have always known that. I am beginning to wonder if Brock knows anything else.

I find Garrett in the data room and close the door behind me which is not something I normally do and he reads the closed door correctly.

"What happened," he says.

"Brock scheduled the institutional review for Sunday. Diane Rell is flying in."

Something moves across his face that he controls quickly.

He knew Diane was coming. He did not know she was coming Sunday.

"I did not know about Sunday," he says. "Tom told me she was planning a visit this month. I did not know she had contacted Brock directly."

Diane Rell went around Garrett to schedule a review on the one weekend we had protected. That is not an accident.

"I know you did not know," I say. "That is not why I closed the door."

Petra finds me at my desk at noon with two coffees and the expression she reserves for when she is about to say something I need to hear.

"Diane Rell requested your personnel file," she says. "Through Brock. This morning."

My personnel file.

"On what grounds," I say.

"Collaboration due diligence. Standard institutional protocol apparently." Petra sets the coffee down. "Sloane. This woman flew in on a weekend and pulled your file before she has been in the building for five minutes. She is not here for the data sharing protocols."

She is here because someone at Garrett's institution told her what the collaboration looks like from the outside and she came to see if it is what it looks like.

Garrett finds me before the review. The hallway outside the conference room. Two minutes before Diane Rell and Brock arrive.

"I want to tell you something before we go in," he says quietly.

"Tell me."

"Diane has been my department head for nine years. She is precise and she is thorough and she is going to ask questions today that are not about data sharing protocols. I want you to know that I know that."

He is warning me. Professionally. Personally. Both.

"What kind of questions," I say.

"The kind that are designed to make the collaboration look like a liability." He looks at me directly. "Answer them exactly as you would answer any professional question. Do not give her a different version of the truth because she is in the room."

He is telling me to be exactly who I am. In front of the woman who came here to find a reason to end this.

The review runs three hours. Diane Rell is precise and thorough and asks exactly the questions Garrett predicted. At the two hour mark she looks at me across the table.

"Dr. Merritt. In your professional assessment does the personal dimension of this collaboration present any risk to the integrity of the joint research findings."

The room goes very quiet.

I can give her the professional answer that is technically true and tells her nothing she can use. Clean. Safe. Defensible. The Research Director giving a formal assessment that closes the file and sends Diane Rell back to her institution with nothing.

Or I can give her the whole truth because I do not know how to give anyone a partial version of the truth and because Garrett just told me to be exactly who I am and because anything less would be a lie and I do not lie about data.

The professional answer protects the collaboration. The whole truth might end it.

I have never given anyone a partial version of the truth in my life. I am not starting today.

"No," I say. "The research integrity is uncompromised. Every finding in this collaboration is independently verifiable and has been subjected to dual methodology review precisely because Dr. Holloway and I approach the data from different institutional frameworks. The personal dimension you are referencing has produced better science not compromised science. That is my professional assessment and I will put it in writing if the review requires it."

Diane Rell looks at me for a long moment.

She is recalculating. Same expression Garrett had on day one.

"That will not be necessary," she says.

The review ends. Everyone files out. I feel like I won.

Garrett finds me in the hallway. He does not say anything. He just looks at me the way he looked at me across the restaurant table in the rain.

Then Diane passes us on her way to the elevator. She looks at us standing together in that hallway. She smiles. Not warmly. The smile of a woman who just confirmed exactly what she came to find out.

I did not win that room. I showed her exactly what she needed to see.

Garrett told me to be exactly who I am. I was. And Diane Rell just catalogued every word of it.

"Same time tomorrow," I say to Garrett. "Whatever Diane does. Whatever Brock does. Same time."

He looks at me. He saw the smile too.

"Same time," he says.

The fire does not ask permission. But now someone knows it is burning.

CHAPTER

6

The caldera vent data comes in at eleven forty-three on a Tuesday and I know before I finish the first read that it does not fit either model.

Not mine. Not Garrett's.

The mountain just made both of us wrong simultaneously. Under other circumstances I would find that funny.

Roy pulls up the secondary array. Marco runs the thermal overlay. The numbers hold. They are not an instrument error. They are not a transmission artifact. They are real and they are saying something neither of us predicted and in forty minutes Garrett is going to walk through that door and we are going to have to decide what they mean.

I already know what I think they mean. I already know he is going to disagree.

Garrett arrives at noon with Tom and looks at the data on the main display for a long time without speaking.

He is doing what I did at eleven forty-three. Reading it twice to make sure.

"The pressure source moved," he says finally.

"The pressure source did not move," I say. "The secondary vent field is operating independently of the main chamber. That is what this data shows."

"This data shows a pressure anomaly that is consistent with lateral migration from the main chamber at depth. It does not show an independent system."

We have been in the same building for six weeks and this is the first time we are genuinely on opposite sides of something that matters.

Petra watches us from the doorway for approximately four minutes before she decides she has somewhere else to be. Tom develops a sudden intense interest in the equipment calibration logs on the far side of the room.

Everyone can feel it. The room has a different temperature now.

"Walk me through your lateral migration model," I say. "Step by step. I want to understand exactly where your interpretation diverges from mine."

"Walk me through your independent system model first," Garrett says. "Because if you are right the eruption timeline changes significantly and I need to understand the data pathway before I can accept that."

He is not dismissing my interpretation. He is asking me to prove it. That is actually how science is supposed to work.

We work through both models for three hours. The room empties around us. Roy leaves the array running and goes home.

Marco finishes the thermal overlay and leaves it on the secondary display.

At four thirty we are still at the table and neither of us has moved the other and the data is still saying what it has been saying since eleven forty-three.

"We need more data," I say.

"We need the December vent readings," Garrett says. "If the independent system model is correct the December thermals will show discrete sourcing. If the lateral migration model is correct they will show progressive gradient."

"Agreed." I look at him across the table. "We will know in three weeks which one of us is right."

He looks tired. I am tired. We have been arguing for three hours and neither of us has won and the mountain is four hours away doing whatever it is going to do regardless of what we decide it means.

At five o'clock Brock appears. He has clearly been waiting for the room to empty and it has finally emptied enough.

"I need a preliminary interpretation on record by Friday," he says. "The federal monitoring agency wants a position statement on the caldera vent anomaly before the end of the week. One statement. From this company."

One statement.

I can file my interpretation alone. It is the stronger model right now. It is defensible. It wins the federal record and it does not require anything from Garrett that Diane Rell can use against him.

Or I can file the joint assessment which is the honest scientific position and which puts Garrett's name beside mine on a federal document that Diane Rell is going to read before the week is out.

The honest answer protects the science. It may not protect him.

I do not know how to file anything other than the honest answer.

I look at Garrett. He is looking at me with the expression that means he already knows what I am about to say.

"Joint preliminary assessment," I say to Brock. "Two competing interpretations, both documented, definitive position pending December data. That is the honest scientific position and that is what goes to the federal agency."

Brock opens his mouth.

"It is also the position that protects the company's credibility if either interpretation turns out to be wrong," I say. "Which it might. That is how science works."

Brock closes his mouth and leaves.

Garrett looks at me across the empty room.

"You did not have to do that," he says. "Your interpretation has the stronger current data support. You could have filed it as the company position and been defensible."

"I know," I say. "I did not want defensible. I wanted right."

I have been cataloguing that look. I have run out of catalog space.

"Dinner," he says. "Tonight. Not the office. Not the data. Dinner."

"Yes," I say.

At dinner Garrett is quieter than usual. I notice. I wait. He refills my glass and looks out the window at the November street and then looks back at me.

"Diane called this afternoon," he says.

"What did she say."

"It is manageable," he says.

Manageable. Not fine. Manageable is the word people use when fine is no longer available.

I do not push. I let him have the word. I file it the way I file a reading that does not fit the model yet.

The fire burns cleaner when you feed it the right things. I am not sure tonight I know what the right things are.

CHAPTER

7

Petra books the cabin in October every year for the first weekend of December. Three nights, no cell service worth mentioning, a wood stove, and what she calls a mandatory decompression from the geological end of the world.

This year there are four of us. Petra. Me. Joanna Brigg from the data team who brings good wine and opinions about everything. And Petra's college roommate Nell who teaches high school chemistry in the valley and has never met a silence she could not fill.

I have been looking forward to this since October. I have been looking forward to it more since Diane Rell smiled at us in that hallway.

We are forty minutes from the cabin when Petra looks at me from the driver's seat.

"So," she says.

Here we go.

"So," I say.

"Garrett Holloway," Petra says.

"Garrett Holloway," Joanna says from the back seat with considerable enthusiasm.

"I don't know who that is," Nell says, "but I already have feelings about him."

This is going to be a long drive.

"He is a visiting scientist from a rival institution," I say. "We are collaborating on the Mount Cassin data. It is a professional arrangement."

The car is quiet for approximately four seconds.

"Sloane," Petra says. "I have worked with you for four years. I have seen you do a professional arrangement. That is not what I have been watching for six weeks."

She is not wrong.

The cabin smells like pine and last year's wood smoke and the particular cold that lives in mountain buildings between October and whenever someone lights the stove. Nell has the fire going in eleven minutes which tells me she has done this before.

Joanna opens the wine.

We talk about Garrett the way women talk about things that matter at a cabin in the mountains with good wine and nowhere to be until Monday. Petra asks precise questions. Joanna asks enthusiastic questions. Nell asks the questions nobody else thinks to ask.

"Does he make you laugh," Nell says.

I think about the city administrator's 1987 geology professor. I think about I contain multitudes.

"Yes," I say.

"Then you already know," Nell says, and refills her glass.

Saturday morning and the cabin smells like coffee and pine and last night's wood smoke. Nell is already at the table with a mug and a paperback. Joanna appears from the back bedroom in a sweater that belongs to someone significantly larger than Joanna.

"Whose sweater is that," Petra says from the kitchen.

Joanna smiles into her coffee.

That is a new smile. I have not seen that smile before.

His name is Curtis Hale. Field contractor. Instrumentation and equipment. He and Joanna have been carefully not dating for four months which apparently looks exactly like dating except nobody has said the word.

"He leaves coffee on my desk," Joanna says. "The right coffee. He learned my order without asking."

"That is not nothing," Nell says.

"That is definitely not nothing," I say.

We spend the morning talking about Curtis the way we spent last night talking about Garrett and I think about how much of what matters fits inside a cabin on a December weekend when the mountain is four hours away and cannot interrupt.

Saturday afternoon and Petra and I are on the porch with our coats and the cold doing its December best and the valley spread out below us like something that does not know there are fault systems underneath it.

"Diane Rell," Petra says. It is not a question.

"She smiled at us in the hallway after the review," I say. "Not warmly."

"I know what kind of smile that is," Petra says.

She does. Petra has been navigating institutional politics since before I started this company.

"Garrett says it is manageable," I say.

Petra looks at the valley. "Men say manageable when they mean they do not want you to worry yet."

I have been thinking that since dinner on Tuesday. I did not want to say it out loud.

Late Saturday night. The wood stove. Joanna and Nell have gone to bed. Just Petra and me and the fire doing what fires do.

I can give Petra the professional version. The collaboration is producing good science. Garrett Holloway is a precise and honest man. The personal dimension is real but manageable.

Manageable. There is that word again.

Or I can tell Petra what I actually know which is that I am thirty-four with a biological clock ticking and I am in love with a man whose department head smiled at us in a hallway like she had just

found what she came looking for.

Petra has worked with me for four years. She already knows. She is just waiting for me to say it.

"What happens when the collaboration ends," Petra says.

The wood stove ticks. The fire burns.

"I do not know," I say. "I know what I want the answer to be."

Petra nods. She does not push. That is why I tell Petra everything.

"The last time I was serious about someone it ended badly and I gave everything to the mountain instead," I say. "You watched me do it for three years."

"I did," Petra says. "I am not watching anymore."

"I am in love with him," I say. "I have been since the restaurant in the rain. Possibly since day one. I do not know what to do with that and I do not know what Diane Rell is building and I do not know how much time we have."

Petra looks at the fire for a long moment.

"Then do not waste the time you do have," she says.

The fire in the wood stove does what fires do. It does not ask what happens next. It just burns.

CHAPTER

8

Sunday morning and the cabin smells like coffee and the last of the wood smoke and the particular quiet of a weekend that is almost over.

Nell is at the table with her paperback and her mug and the contentment of a woman who has nowhere to be until Monday. Joanna is in the kitchen making something that involves more pans than the situation probably requires. Petra is on the porch with her coffee watching the valley the way Petra watches everything — completely and without commentary.

I slept nine hours. Two nights in a row. The mountain has not called. Roy has not texted. The monitoring room is running without me and the world has not ended.

This is what normal feels like. I had forgotten.

After breakfast Joanna tells us more about Curtis.

Not the sweater. The man.

Curtis Hale who grew up in eastern Oregon and knows every mountain road in the state and can fix any piece of field instrumentation with whatever is available and who learned Joanna's

coffee order without asking and who has been leaving it on her desk every morning for four months without saying a word about what it means.

"He asked me to dinner," Joanna says. "Last week. Before we came up here."

"What did you say," Nell says.

"I said yes," Joanna says. "Obviously."

Petra raises her mug. "Finally."

Curtis Hale learned her coffee order and waited four months and then asked. There is a patience in that I recognize from somewhere.

Garrett Holloway read my October methodology appendix before he walked through my door.

Sunday afternoon and we are doing the things that get done on the last afternoon of a cabin weekend. Dishes. Laundry. Repacking bags with the particular efficiency of people who know Monday is coming whether they are ready or not.

Petra and I are folding blankets in the main room when she looks at me.

"You seem different," she says.

"Different how," I say.

"Like you made a decision," she says. "Without telling anyone."

She is not wrong. I did not know I had made it until she said it out loud.

"I am done waiting for the timing to cooperate," I say.

Petra folds the last blanket. "Good," she says. That is all.

Sunday dinner. The last of the wine. The wood stove down to its final hour. Nell is quieter than she has been all weekend which is noticeable because Nell is never quiet.

"Frank proposed," she says. "Thursday. Before we came up."

The table goes completely still for one second.

Then Joanna is out of her chair and Petra is laughing and the wine is going somewhere it was not intended to go and Nell is sitting in the middle of all of it with the expression of a woman who has been holding something wonderful since Thursday and is very glad to have finally put it down.

I look at Nell across the table. Nell who asked does he make you laugh on Friday night and already knew the answer before I gave it.

She knew on Friday. She was just waiting for the rest of us to catch up.

Late Sunday. Everyone in their rooms. Me at the window with the last of my wine and the valley dark below and the wood stove ticking itself to sleep.

I can go back to the monitoring room on Monday and let this weekend be what it was — a good weekend, necessary, useful — and return to the version of my life that has the mountain in it and Garrett in it and Diane Rell's smile in the background.

Or I can let Nell's news mean what it means which is that the timing never cooperates and the people who end up at a June wedding are the ones who decided to want it before the timing was ready.

Garrett said that. Build what you want in the middle of the inconvenience.

I am ready to build.

Monday morning. The cabin packed up. The wood stove cold. Petra locks the door and we carry our bags to the car in the December quiet.

I look back at the cabin once.

The fire has been burning all weekend. Tomorrow it goes back to being about the mountain. Tonight it is still mine.

We drive down the mountain toward the city and the monitoring room and whatever Garrett Holloway's face looks like on a Monday morning after three days apart and I think about June and what I want June to look like and I do not look at my phone once the whole drive down.

I am not the same person who drove up here on Friday. The mountain does not know that yet.

CHAPTER

9

Monday morning and the building smells like coffee and Roy has the array running and Deb has sorted the weekend incident reports into two piles on my desk — one for Mount Cassin and one for Ridgeback — and everything is exactly where I left it.

Everything except me.

I am four minutes early which is normal. Garrett is already at the data table which is also normal. What is not normal is that I walk in and he looks up and something in the way he looks up is different from every other Monday morning since November.

He missed me. Three days and he missed me and he is not hiding it.

"Good weekend," he says.

"Good weekend," I say. "The December vent readings came in."

"I know," he says. "I have been waiting for you."

The December thermal data is on the main display and Roy is watching us from the corner of the room with the carefully neutral expression he uses when he is paying close attention to something he

has decided not to appear to be paying close attention to.

Roy. Subtle as a magnitude four.

Garrett pulls up the overlay and we look at it together and the data is saying what it is saying and it is unambiguous and we both know it within thirty seconds.

Discrete thermal sourcing. Two independent signatures. No progressive gradient.

My model. The independent system model. The mountain spent three weeks deciding and it decided in my favor.

I do not say anything. I wait.

Garrett looks at the display for a long time.

He is thorough. He is checking every alternative interpretation before he concedes. That is who he is and I would not want him to be different.

"Discrete sourcing," he says finally. "Two independent signatures. No gradient progression."

"No gradient progression," I say.

"Your model is correct." He straightens. "The caldera vents are operating as an independent system. The lateral migration interpretation does not fit the December data."

"No," I say. "It does not."

Roy makes a sound from the corner that is definitely not a laugh.

Garrett looks at Roy. Roy finds something urgent to do with his coffee.

"Congratulations, Dr. Merritt," Garrett says. And then very quietly, so only I can hear it — "You were right. You are almost always right. I am starting to find that unreasonably attractive."

Oh.

We spend the morning rewriting the joint preliminary assessment with the December data incorporated. The independent system model is now the documented position. Garrett's lateral migration model is noted as the prior competing interpretation, tested against the data, and conclusively ruled out.

He writes that section himself. His own model, ruled out, in his own words.

"You do not have to write that section," I say.

"Yes I do," he says. "It is accurate and it is my work and I stand behind accurate work even when it goes against me. Especially when it goes against me."

He would not have done that. The last one would have found a way to make this my fault.

I am not thinking about the last one. I am thinking about Garrett writing his own refutation with the same precision he brings to everything and what that says about who he is.

At two o'clock Brock calls us both into his office.

"The federal agency wants the updated assessment by Friday," he says. "And Diane Rell called this morning. Her institution wants to file a separate interpretation document alongside ours. She is calling it a parallel assessment."

A parallel assessment.

Diane Rell is going to file Garrett's ruled-out lateral migration model as her institution's official position alongside our corrected joint assessment. She is not going to let the December data stand unchallenged.

Brock looks at me. "She has the right to file independently. I cannot stop her."

I can respond with a formal scientific rebuttal. Public. Precise. The kind that ends careers and starts institutional wars and protects the data record completely.

Or I can let it stand and trust that any scientist who reads both documents and looks at the December data will reach the same conclusion without my help.

One of them escalates. One of them trusts the science.

One of them also protects Garrett from a public dispute with his own institution.

I look at Garrett. He is very still.

"Let it stand," I say to Brock.

Brock blinks. "Sloane —"

"Let it stand. Our assessment is correct and the data is public and any scientist who reads both documents will reach the same conclusion. We do not need to start a public dispute to be right. We just need to be right."

Brock leaves.

Garrett is quiet for a moment.

"That cost you something," he says.

"It cost me an argument I would have won," I say. "That is not the same as losing something that matters."

He looks at me across the office.

There is that look. There is the look I have run out of catalog space for.

"Dinner," he says. "Tonight. I have something I want to say that is not about the data."

My heart does the thing it has been doing since November.

"Yes," I say. "Tonight."

The fire is burning and the mountain knows its own name and tonight Garrett Holloway has something to say that is not about the data.

CHAPTER

10

Tuesday morning. Six forty-seven a.m. I have been at my desk for forty minutes because the dinner last night was everything and I have not entirely returned to earth and the best way I know to return to earth is data.

Garrett said he loved me over the second glass of wine.

I said I loved him back before he finished the sentence.

I have been saying it in my head since November. Saying it out loud was the easiest thing I have done in three years.

My email opens. Forty-two new messages since midnight.

The first one is from the federal monitoring agency. The subject line reads: DUPLICATE PUBLICATION FILING — MOUNT CASSIN CALDERA VENT ASSESSMENT — ACTION REQUIRED.

The earth returned. Fast.

Diane Rell did not file a parallel assessment.

She filed first.

Garrett's institution submitted their lateral migration interpretation to the federal agency at eleven forty-seven p.m. — four hours after our dinner, six hours before my morning coffee — and claimed scientific priority on the Mount Cassin caldera vent findings.

Our findings. The data we collected. The model I built.

Roy is in my doorway at seven fifteen with his coffee and his carefully neutral expression and one look at my face tells him everything.

"How bad," he says.

"They filed at eleven forty-seven," I say.

Roy sits down. "Oh."

Oh is correct.

Garrett does not know.

I know he does not know because he walks in at seven thirty with two coffees — mine correct, his wrong, he always gets his own wrong — and the expression of a man who had an excellent evening and is expecting Tuesday to be reasonable.

He reads my face the same way Roy did.

"What happened," he says.

I turn my monitor toward him.

He goes very still. He reads the federal agency email. He reads it again. He sets both coffees down very carefully on the edge of the desk.

He did not know. He did not know and now he knows and I am watching him understand what his institution did while we were at dinner.

"Diane," he says.

"Diane," I say.

He calls her from the hallway. I do not follow him. I stand at my desk and I drink my coffee which is correct and I listen to the shape of the conversation without the words and the shape tells me everything.

Short sentences. Long silences. One moment where his voice drops to something I have not heard from him before.

He comes back in seven minutes.

"She filed on my behalf," he says. "Standard institutional protocol when collaborative data is at risk of being claimed by an outside party. She did not consult me because the protocol does not require consultation. She was protecting the institution's scientific priority."

She was protecting the institution. At eleven forty-seven p.m. while we were at dinner saying the thing we said.

"Garrett," I say.

"I know," he says. "I know exactly what this looks like and I know exactly what it means and I need you to know that I did not know."

I believe him. I believe him completely. That is not the problem.

Brock arrives at eight o'clock with his lawyer voice and his merger opportunity expression and the particular energy of a man who has been handed a crisis and decided it is actually an opportunity.

"The institution filed first," he says. "We can contest it — formal dispute, federal review, full documentation of our data collection timeline. We win that dispute. Our collection dates predate theirs by eleven weeks." He looks at me. "Or we accept a joint publication credit. Split priority. Both institutions named. Diane Rell is already proposing it."

A joint publication credit.

Diane Rell tried to steal our findings at midnight and is now offering to share them as though the theft were a negotiating position.

I can contest it. I win. Garrett's institution loses publicly and Diane Rell's career takes a significant hit and Garrett is caught between his institution and me in a federal dispute with his name on the wrong side.

Or I accept the joint credit. The science gets published. The data reaches the people who need it. And Garrett does not spend the next six months standing in the wreckage of a federal dispute about his own institution.

Both are just. Only one of them protects what matters most right now.

I look at Garrett. He is looking at me with the expression that means he already knows what I am facing and he is not going to tell me what to do.

He would not tell me what to do. That is who he is.

But I can see what it would cost him. I can see it clearly.

"Joint credit," I say to Brock. "Equal billing. Full data collection timeline documented in the methodology. Our collection dates on record." I pause. "And Brock — I want a revised collaboration agreement on my desk by Friday that requires institutional notification to both parties before any future filings. Non-negotiable."

Brock nods and leaves.

The room is quiet.

"You keep doing that," Garrett says.

"Doing what," I say.

"Paying a price you did not owe to protect something that matters." He looks at me directly. "I am going to talk to Diane. Today. This does not happen again."

I know he means it. I know it the same way I know the mountain.

The fire burns. Someone keeps trying to put it out. It does not go out.

CHAPTER

11

Garrett has been at his institution for three days for what Diane Rell called an urgent departmental review and what Tom privately told me was a formal inquiry into the conference presentation — specifically the moment Garrett conceded the lateral migration model in public in front of the entire field.

Diane Rell called her own scientist to account for telling the truth.

He texts at odd hours. Brief. Professional. The texts of a man who is being watched and knows it.

I run the morning array. I brief Roy. I drink my coffee which is correct. I do not check my phone more than is reasonable.

I check my phone more than is reasonable.

Brock appears in my doorway at nine with the expression that means he has had a conversation I do not know about yet.

"Diane Rell called," he says.

Of course she did.

"She is proposing a formal restructure of the collaboration agreement," Brock says. "Garrett would remain on the project but all

external communication — publications, federal filings, conference presentations — would require dual institutional sign-off. Meaning her sign-off."

Her sign-off.

Diane Rell wants a veto on every word Garrett and I say publicly about Mount Cassin.

"That is not a collaboration restructure," I say. "That is a supervision arrangement."

"She is framing it as quality control protocol following the conference."

"She is framing it as quality control because she cannot frame it as what it actually is." I look at him. "Which is retaliation."

Brock has the expression of a man who knows I am right and wishes I were wrong because wrong would be simpler.

"She has legitimate institutional standing to make the request," he says.

I know that. I know that and it makes it worse.

Garrett calls at noon. Not a text. A call. Which means he is somewhere Diane Rell is not.

"You heard," he says.

"Brock told me this morning."

"I want you to know I am fighting it. I went to the department chair this morning. The inquiry into the conference presentation is

retaliatory and I have documentation and I am not letting this stand."

He is fighting it. From inside an institution that has already shown it will move at midnight without consulting him.

"Garrett," I say. "How bad is it."

A pause. The kind of pause that has a specific weight.

"It is manageable," he says.

Manageable is not fine. Manageable is the word people use when fine is no longer available.

"Tell me the truth," I say.

"The truth is that Diane has more institutional standing than I expected her to use and I underestimated her and I am correcting that now." Another pause. "I am coming back Friday. We need to talk in person."

Friday and Garrett is back and we are in the conference room with the door closed and Roy has told the entire office that the conference room is unavailable until further notice which is Roy's way of helping.

I love Roy.

Garrett looks tired in a way that three days of institutional combat produces. He looks at me across the table the way he looked at me from the secondary display on day one — reading the data, making sure he has it right before he speaks.

"Diane is moving to terminate the collaboration," he says. "Not immediately. She is building a procedural case. Improper data sharing

protocols, undisclosed conflicts of interest, the conference presentation as evidence of compromised scientific objectivity." He pauses. "She is going to take three to four months to build it. But that is where she is going."

Three to four months.

The collaboration has a ceiling now. We can see it from here.

"And you," I say. "What does this mean for you."

"It means I have three to four months to either change her mind or find a different position." He looks at me directly. "I am not leaving, Sloane. I want to be clear about that. I am not leaving."

I hear him. I also hear three to four months and a ceiling and Diane Rell building a procedural case and I am a Research Director. I know what procedural cases look like when they are finished.

"I need to ask you something," I say.

"Ask it."

"If Diane terminates the collaboration and you cannot find a position here — if the institutional situation makes it impossible for you to stay in this city — what happens."

It is the question Petra asked on the cold porch. The one I answered with I do not know but I know what I want the answer to be.

I need to hear him answer it.

I can let it sit unasked and protect the next three to four months from the weight of the answer. Or I can ask it now and know what we

are actually building toward before I build any further toward it.

Both are honest. Both are terrifying in different directions.

I asked it. It is already asked.

Garrett is quiet for a long moment.

He is not going to give me the easy answer. He is too honest for the easy answer and I knew that before I asked.

"I do not know," he says. "I want to tell you that it does not matter and that I will find a way regardless of what Diane does. I believe that. I also believe in being accurate with you above being reassuring." He looks at me. "I do not know. What I know is that what we are building is worth finding out."

What we are building is worth finding out.

It is not the answer I wanted. It is the truest answer he could give and I know the difference and I am a woman who knows what to do with the truth even when the truth is inconvenient.

"Okay," I say.

"Okay," he says.

The fire burns. The ceiling is visible. We build anyway.

CHAPTER

12

Mount Cassin has been quiet for nine days.

I do not trust a quiet mountain. But I am choosing to accept the gift of it today.

Garrett is waiting at the near end of the river path when I arrive. Not the long path. The short bench where the city noise drops off and the water does its indifferent thing. He has two coffees — mine correct, his wrong — and he is looking at the water the way he looks at data he has already decided is what it is.

He got here first. He always gets here first when it matters.

I sit down beside him.

"The mountain is quiet," he says.

"Nine days," I say.

"What does that mean in your experience."

"It means it is thinking," I say. "It means something is building that the surface is not showing yet."

He looks at me when I say that. With the expression.

We drink our coffee. The river does what rivers do. A man walks past with a bicycle and does not look at us and the city makes its city sounds at a respectful distance.

This is the thing we do not have enough of. Just this. The bench and the coffee and the water and no array running and no Diane Rell building her case and no federal agency wanting a position statement.

Just this.

"I have been thinking about something," Garrett says.

"Tell me."

"The collaboration has a defined end date," he says. "Diane's case has a timeline. The federal agency's interest in Mount Cassin has a review cycle. Everything in this professional arrangement has a defined end date." He looks at the water. "I do not want a defined end date."

My heart does the thing it has been doing since November.

"What do you want," I say.

I know what he wants. I have known since the restaurant in the rain when he said he was building what he wanted in the middle of the inconvenience. I want to hear him say it on this bench with the river as witness.

He turns to look at me directly. No performance. No management. Just Garrett Holloway checking the data one final time before he speaks it out loud.

"I want what we are building to be the actual fact of my life," he says. "Not a collaboration with a review cycle. Not a professional arrangement with an end date. You. This city. This bench. The argument about the Ridgeback reanalysis that we have been having for three weeks. All of it."

All of it.

The bench and the coffee and the wrong coffee for himself and the monitoring room and the array and Roy and Marco and the mountain thinking its quiet thoughts four hours north.

All of it.

I have been carrying something since the monitoring room on day one when he stepped up to the secondary display without being asked and filled the gap.

I have been carrying it through seven complications and a conference and a midnight filing and Diane Rell building her case and Petra on the cold porch and my mother saying decided.

I have been carrying it and managing it and cataloguing it and running out of catalog space and I am a Research Director sitting on a bench in the middle of the afternoon with the mountain quiet for nine days and the man I love looking at me like I am the most important data he has ever read.

I am done carrying it.

"I love you," I say. "I have loved you since you stepped up to that display on day one and filled the gap without being asked. Since you wrote your own refutation in your own words. Since you backed me

in that city briefing with your own institution's data and did not make it a moment." I look at him directly. "You are the actual fact of my life. You have been since November and I am done pretending the timing needs to cooperate before I say it out loud."

He is very still.

He is checking the data. He always checks the data. I would not want him to be different.

The river. The city. The bench holding both of us.

I said it. It is already said. There is no version of the next thirty seconds that takes it back and I do not want one.

I can sit in this stillness and let him check the data for as long as he needs. Or I can say the rest of it — the part about the defined end date and what I want and the actual fact of a life — and not make him carry the next thirty seconds alone.

Both are honest. Both are real. Both are available on this bench on this afternoon with the mountain quiet and the river indifferent and nothing between us except everything we have been building since day one.

I know which one I choose.

"I do not want a defined end date either," I say. "I want the bench and the wrong coffee and the argument about Ridgeback that neither of us is going to win. I want the monitoring room and the array and Roy pretending not to watch and Marco pulling up the thermal overlay. I want the mountain and the city and all of it with you in it." I pause. "That is what I want. That is the actual fact of my life and I am

done managing it like a federal briefing."

Garrett looks at me for a long moment.

Everything I can read tells me so.

"I love you," he says. "I have loved you since you said yes it is in the monitoring room on day one and meant twelve different things by it. Since you filed the joint assessment when your own model was stronger. Since you accepted joint credit when Diane filed at midnight and you could have walked away clean."

He kisses me on the river bench with the city doing its afternoon things around us and the mountain quiet four hours north and the water indifferent and the coffee going cold.

The fire. Full and certain and not going anywhere.

Nine days of quiet. The mountain building something the surface is not showing yet.

So are we.

CHAPTER

13

Wednesday and Garrett arrives at the monitoring room with the right coffee for me and the wrong coffee for himself and something different in the way he sets them down.

Not the Cassin different. Not the Diane Rell different. Something that lives underneath the science entirely.

Roy glances at me from the array. He sees it too. Roy always sees it. Roy just never says anything unless I ask.

I do not ask.

"Can we go to the bench," Garrett says.

Not a question. The bench in the middle of a Wednesday morning with Mount Cassin no longer quiet — it has been producing low-frequency tremors for thirty-six hours — and the array running and Marco on the secondary display.

Whatever this is it cannot wait for a better time.

"Yes," I say.

The bench. The river. The city sounds dropping off the way they always do at this end of the path. Same bench where four days ago he

said I do not want a defined end date and I said you are the actual fact of my life and the coffee went cold and neither of us noticed.

The bench is different now. It has the declaration in it. It has the kiss in it. It has weight.

He sits. I sit. He holds the wrong coffee in both hands and looks at the water the way he looks at data he has been checking and rechecking for a long time and has finally decided is what it is.

"I need to tell you something," he says.

Three weeks ago I would have said tell me and meant the science. Right now I mean everything.

"Tell me," I say.

"My brother invested in a business two years ago," he says. "Small operation. Good partners. Solid plan. It failed anyway the way small businesses fail — not dramatically, just steadily until it was gone. He lost everything." He pauses. "I invested with him. A significant amount. I lost it with him. I am managing it. It is not a crisis. But it is real and it has been real since before I walked through your door and I did not want you to not know it."

He looks at the water when he finishes. Not performing. Not managing. Just the fact of it on the bench between us like data that has been waiting to be filed.

The river does what the river does.

He told me because he trusts me. He told me the thing he has been carrying alone since before November and he put it down on this bench in the middle of a Wednesday because he decided not telling me

was a choice he did not want to make.

I know what that costs. I know exactly what that costs.

And I am angry.

Not at his brother. Not at the failed business. Not at the debt or the amount or any of the facts of it.

Angry at the not telling. Angry at the weeks he sat across from me in the monitoring room and the conference and the city briefing and the restaurant in the rain and this bench four days ago with the coffee going cold — and he knew this and I did not.

I know what it is to carry something. I know exactly why a person carries it alone. That is precisely why I am angry.

I stand up.

I did not plan to stand up. My body made that decision independently.

"Sloane," he says.

He is looking at me with the expression I do not have a catalog entry for — not the data expression, not the Diane Rell expression. The one underneath all of those. The one that knows it miscalculated something and is trying to read where the fault line actually runs.

I can sit back down. Tell him it is fine. Let the bench absorb this the way it absorbed the declaration four days ago and move forward into the work and the array and the thirty-six hours of low-frequency tremors from the mountain.

Or I can go. Let him sit with the river and the wrong coffee and the fact of what just happened. Not to punish him. Because I am a volcano and right now I need to be somewhere that is not this bench.

Both are available. Both are honest. Both cost something.

I already made the choice. I am already standing.

"I need to walk," I say.

"Sloane —"

"I am not leaving." I look at him directly. "I am walking. There is a difference."

He is very still.

He is reading the data. He is accurate enough to know this is not about the money or the brother or the business. He is accurate enough to know he hit something old and he does not yet know what it is or why.

Good. Let him sit with that. Let the river be indifferent at him for a while.

I walk back up the path toward the city. I do not look back.

Behind me the bench holds one person now instead of two and the wrong coffee is going cold and the mountain is producing low-frequency tremors thirty-six hours running and I am a Research Director walking fast through a city that does not know or care what just happened on that bench.

I am not fine.

I am also not done.

CHAPTER

14

The anomaly makes the decision for us.

Tremor origin point four kilometers deeper than any previous event on the Cassin array. Harmonic signature inconsistent with both models. Tiltmeter on the northwest flank showing ground inflation at a rate that does not fit a closed magmatic system and does not fit lateral migration either. It fits something we do not have a model for yet and the only way to build the model is to put sensors on the mountain and read what the mountain is actually saying.

"Ten days minimum," Garrett says. Looking at the tiltmeter data on the main display.

"Ten days," I say.

"I want to place three broadband seismometers on the northwest approach and run continuous SO2 flux measurements from the secondary fumarole field. If there is a new pathway opening we will see it in the gas chemistry before we see it in the seismic record."

He is already on the mountain. He has been on the mountain since the harmonic signature came in at 0400 this morning.

"Marco comes," I say.

"Marco comes," he says.

"So do I," I say.

He looks at me. He does not argue. He knows better than to argue with a Research Director about her own mountain.

Day two and we are at twenty-two hundred meters on the northwest approach and the mountain is doing the thing mountains do when scientists arrive — performing innocence.

I do not trust it.

Garrett places the first broadband seismometer with the precision of a man who has done this on six continents and knows that a sensor placed three degrees off true will produce data that lies quietly and convincingly for weeks before anyone notices. He does not rush. He does not approximate.

Marco is running the SO2 flux meter downslope at the secondary fumarole field and reporting back every two hours on the radio.

The temperature at altitude is eight degrees Celsius and dropping.

I have been on this mountain forty times. I have never been on it with someone who reads it the way I do.

"P-wave velocity is anomalous in this quadrant," Garrett says without looking up from the sensor housing. "The substrate here is not what the geological survey says it is."

"It never is," I say.

He looks up at me then. With the expression.

Day four and the SO2 flux data from the secondary fumarole field is producing numbers that make both of us stop talking in the middle of whatever else we were doing.

"That is not a closed system," Garrett says.

"No," I say.

"The flux rate indicates a new degassing pathway. Something opened recently — weeks, not months."

We are standing at the fumarole field with the FTIR analyzer between us and the gas plume rising steady and white against the grey sky and the data on the screen saying something neither of our models predicted.

"If there is a new pathway," I say. "And it connects to depth —"

"Then the four kilometer hypocenter shift is not an anomaly," he says. "It is the top of something much larger."

Much larger.

I look at the fumarole field. The mountain looks back.

Marco radios from base camp. The GPS deformation data just updated. Ground inflation on the northwest flank accelerated overnight.

The mountain has been building this for a long time. It has been waiting for us to put the right sensors in the right places.

Day seven and a storm comes in off the north and keeps us in the base camp tent for fourteen hours with the wind doing what wind does at altitude and the data transmitting back to Roy on the satellite uplink every six hours and nothing to do except be two people in a tent on a mountain.

There is nowhere to manage anything at altitude in a storm. That is the thing about the field. The mountain takes everything that is not essential and removes it.

We talk. Not about the data — we have been talking about the data for seven days. We talk about other things. His first field deployment at twenty-four in Iceland. The way my mother used to bring geological survey maps to dinner and spread them across the table between the plates. His brother before the business failed — who he was, what he built, why Garrett believed in it.

He does not explain. He does not justify. He just tells me.

I tell him about the first time I understood what the Ridgeback fault meant for this city. Sixteen years old. Standing on the river path where the bench is now. Looking at the city and understanding for the first time that everything standing in it was standing on something that moved.

"That is when you decided," he says.

"That is when I decided," I say.

The storm runs itself out around 0300. The mountain is quiet again in the way it is quiet when it is not actually quiet.

Day nine and Garrett is running the final seismometer placement on the upper northwest approach — technical terrain, exposed traverse, the kind of work that requires full concentration and a partner who knows when to speak and when not to.

I am the partner.

I have been the partner on this mountain for nine days and I know his field rhythm the way I know the array data — not because I studied it, because I paid attention.

He stops on the traverse. Looks at the rock face to the left. Looks at his placement map. Looks at the rock face again.

"There is a secondary fracture system here that is not on any survey," he says. "Running northeast. Toward the Ridgeback corridor."

Toward the Ridgeback corridor.

A fracture system connecting Mount Cassin's northwest flank to the Ridgeback fault at depth. If the new degassing pathway follows this fracture system — if the magmatic activity at Cassin is applying pressure to a fault system that runs directly under the city —

"We need a sensor here," I say.

"Yes," he says. "And we need to file an amended hazard assessment with the federal agency the moment we get back down."

The moment we get back down.

Tomorrow. We go back down tomorrow.

I look at the city invisible somewhere to the south beyond the cloud layer and the mountain solid under my boots and Garrett on the

traverse reading a fracture system that changes everything we thought we knew about what this mountain is capable of.

I can think about tomorrow. Or I can be here for the last full day on this mountain with this man and this data and this fracture system that the mountain has been hiding for as long as anyone has been looking.

We place the sensor.

It takes forty minutes on technical terrain in dropping visibility and Garrett does not rush it and does not approximate it and I hand him what he needs before he asks for it because I know the rhythm and the mountain does not care if we are cold.

When it is done he checks the transmission signal. Solid. The sensor is talking to the array. The array is talking to Roy. Roy is somewhere warm in the monitoring room drinking correct coffee and receiving data from a mountain that has been lying to everyone for a very long time.

"Good placement," I say.

"Good placement," he says.

He is not talking about the sensor.

We stand on the northwest approach of Mount Cassin at twenty-four hundred meters with the cloud layer below us and the fracture system mapped and the SO2 flux data and the GPS inflation and the four kilometer hypocenter shift all pointing at the same conclusion — the mountain is connected to the city in a way that nobody modeled and the Ridgeback fault is not as quiet as it has been

pretending to be.

Ten days.

I know who this man is now. Not the scientist — I knew the scientist on day one. The man. The one who goes cold and careful on technical terrain. Who talks about his brother without justification. Who holds the wrong coffee for three hours because he does not know what else to do with it.

"Tomorrow," he says.

"Tomorrow," I say.

The fire. Burning at altitude. Burning in the cold. Burning because it is that kind of fire.

We go back down tomorrow. The city is waiting. The data is waiting. The amended hazard assessment is waiting.

The mountain has one more day to be quiet before we tell everyone what it has been hiding.

CHAPTER

15

We come down from the mountain on a Thursday.

The city looks the way it always looks after ten days at altitude — smaller, louder, unaware of what is sitting above it on the northwest flank. The monitoring room is exactly as we left it except Roy has reorganized the printout filing system which he does when he is managing stress and does not want to say so.

The amended hazard assessment takes us two days to write. It is precise and it is thorough and it connects the fracture system to the Ridgeback corridor with enough supporting data that the federal agency cannot set it aside. Garrett writes the seismic analysis. I write the volcanic hazard section. We file it jointly on Saturday morning.

Saturday afternoon the federal deployment order arrives.

I am at my desk when it comes through. Garrett is at the secondary display running the updated hypocenter data from the new northwest sensor.

He sees it before I do. I know because I am watching the thermal overlay and I hear him stop typing.

The kind of stop that has weight.

"Sloane," he says.

I look up.

He is looking at his screen with the expression I do not have a catalog entry for — not the data expression, not the bench expression. Something older than both of those. Something that has been waiting behind all the other expressions since before the mountain.

"The Pacific Rim deployment order came through," he says. "My name is on it."

Pacific Rim.

The fault system his institution has been monitoring for three years. The system that connects — I know this now, we mapped it, we filed it this morning — to the Ridgeback corridor. To the fracture system on the northwest flank. To everything we spent ten days on the mountain documenting.

"When," I say.

"Tuesday," he says.

Three days.

Roy is not in the monitoring room. Marco is not in the monitoring room. It is Saturday afternoon and the building is quiet and the city outside does not know what the mountain is connected to and I am a Research Director sitting at her desk looking at a volcanologist who is looking at a deployment order with his name on it.

"How long have you known," I say.

I do not plan to ask it. My body makes that decision independently. The same way it stood up on the bench.

He is quiet for one moment.

One moment that has a specific weight.

"Four days," he says.

Four days.

Four days on the mountain. Day six through day ten. The storm in the tent on day seven when he talked about his brother without justification and I told him about standing on the river path at sixteen and understanding what the Ridgeback meant. Day nine on the traverse when we found the fracture system. Day ten placing the sensor in dropping visibility and him saying good placement and not talking about the sensor.

He knew for four days and he did not tell me.

I stand up.

Not the bench stand-up. Something different. Something that starts lower and goes colder.

"Four days," I say.

"Yes."

"On the mountain."

"Yes."

"While we were — " I stop. "Four days."

"I did not want it to change the last days on the mountain," he says. "I wanted those days to be what they were."

He wanted those days to be what they were.

I understand that. I understand it completely and it does not matter that I understand it because understanding why a person carries a secret alone does not change what the secret costs.

"I told you," I say. "On the bench. After the brother. I told you what secrets do to me and you said yes and you looked at me like you understood and four days later you were on the mountain carrying a deployment order with your name on it and you did not tell me."

He does not look away. He does not perform remorse. He holds it the way he holds everything — directly, accurately, without flinching.

"You are right," he says. "I made the wrong call."

He is not going to fight the deployment. I know that before he says it. He is a scientist who monitors the Pacific Rim fault system and the deployment order has his name on it because he is the right person for it and he knows it and I know it and the science knows it.

He could quit. Refuse the order. Stay in this city with the amended hazard assessment and the new northwest sensor and the fracture system that connects everything to everything. He would do it. If I asked him he would do it.

I could ask him.

I could ask him and he would stay and in six months or a year the Pacific Rim fault would produce the event his institution has been

predicting for three years and he would be here instead of there and we would both know it.

Or I can close the door.

Not because I do not love him. Because I do. Because he is a scientist who goes where the fault goes and I knew that on day one and loving someone means knowing who they are and letting them be that person even when it costs you everything.

Both are available. Both are real. Both are honest.

One of them is who I am.

"Go," I say.

He looks at me.

"Go. File your deployment confirmation. Pack your field kit. Take the Tuesday flight." I look at him directly. "You are the right person for it. The data says so. The fracture system we mapped says so. Everything you can read says so."

My own words. Back at me again. The mountain does not let you keep anything.

"Sloane —"

"I cannot do the four days," I say. "I told you what secrets cost me. You knew and you made the call you made and I understand why and it does not change what it costs." I stop. "I cannot do the four days and six to eight months of a Pacific Rim deployment and not know if there will be more four days I do not know about. I cannot build that."

He is very still.

He is reading the data. He is reading it accurately. He knows I am not wrong.

"I know," he says. Quiet. Just that.

The monitoring room holds the silence for a moment. The thermal overlay runs. The new northwest sensor transmits from twenty-four hundred meters. Roy is somewhere in the building pretending not to exist.

I loved you on this mountain. I love you standing in this room. I will love you on Tuesday when you take the flight.

That is not enough. It is also not nothing.

"Good placement," I say. Barely.

He looks at me one last time with all the expressions at once.

Then he goes.

The door closes.

The monitoring room is exactly as it was before November except that it is not and it never will be again.

The fire. Out.

Embers. Memories. The bench. The wrong coffee going cold.

The mountain thinking its deep thoughts four hours north.

I put my headset on. I pull up the thermal overlay. I do my job.

CHAPTER

16

Six weeks since Tuesday.

The Pacific Rim deployment is producing data that the federal agency is publishing in weekly bulletins and I read every one of them the way I read the mountain — looking for what the surface is not showing. I do not contact Garrett. He does not contact me. That is the door I closed and I closed it cleanly and I am a Research Director with three active monitoring systems and a fracture system connecting Mount Cassin to the Ridgeback corridor that nobody in this city fully understands yet except me.

I am fine.

I am also a volcano and volcanoes do not mope. They build pressure and they do their job and they wait.

The Ridgeback array has been producing micro-swarm activity for eleven days. Not alarming. Not unprecedented. Consistent with the stress transfer model we filed in the amended hazard assessment — magmatic pressure at Cassin loading the fracture system, the fracture system nudging the Ridgeback, the Ridgeback doing what stressed fault systems do. Accumulating.

I brief Roy at 0730 the way I always brief Roy at 0730.

"The swarm is tightening," Roy says.

"Yes," I say.

"That is not good."

"No," I say. "It is not."

The Ridgeback moves at 11:14 on a Wednesday morning.

Magnitude 6.3. Hypocenter eight kilometers depth. Direct hit on the corridor we mapped from the northwest flank. The monitoring room goes from quiet to full emergency in approximately four seconds — every array live, every alarm active, Marco pulling lateral spread data, Deb on the phone with the city emergency coordinator, Roy standing at the main display with the expression of a man who has been quietly expecting this for eleven days and is not satisfied about being right.

I am already at the primary array before the fourth alarm sounds.

This is what I built this company for. This exact moment. The mountain told us and we listened and we filed the assessment and now the city needs to know what we know and I am the person who knows it.

"Marco — lateral spread on the Ridgeback south corridor. Roy — get the city engineer on the line. Deb — federal agency, amended assessment reference number, they need to activate the response protocol now."

The room moves. My room. My people. My mountain.

The initial shaking runs forty seconds. Then the aftershock sequence begins.

The federal agency's response coordinator calls at 12:30 to tell me they are deploying a structural assessment team and an independent fault specialist.

"Who," I say.

"Reid Castor," she says. "He was already in region. He can be there by 1700."

I do not know the name. Which means he is not institutional. Which means he is exactly what his title says — independent.

"Fine," I say. "Tell him to come directly to the monitoring room. I will brief him on the fracture system assessment when he arrives."

I go back to the array. The aftershock sequence is running a classic Omori decay pattern which is the best possible version of what this could be and I am not comfortable yet because comfort is not a scientific position.

Roy appears at my elbow at 1630.

"Your independent specialist is in the lobby," he says.

Roy's face is doing something I do not have a catalog entry for. Which from Roy — who has been in this monitoring room for eleven years and has seen everything — is notable.

"Send him up," I say. Without looking away from the array.

I hear him before I see him.

Not loudly. The opposite. The monitoring room has been running at full emergency volume for six hours and when Reid Castor walks through the door something in the room adjusts — not quieter, just differently weighted — the way air pressure changes before a significant weather event.

I look up.

Oh.

He is not what I expected from a federal deployment. He is what you get when a fault system sends for the one person who has stood in the rubble of every major event in the last fifteen years and knows what the ground is saying before anyone else does. Forty-one years of field work written in the way he carries himself — not performed, not managed, just present in the room the way a magnitude event is present. You feel it before the instruments confirm it.

He looks at the primary array display.

Then he looks at me.

The ground moves.

Not the Ridgeback. Something else entirely.

I am a Research Director in the middle of a 6.3 response and I am standing very still.

"Dr. Merritt," he says. Not a question. He already knows.

"Mr. Castor," I say.

"Reid," he says. Looking at the array. "That is a clean Omori sequence. You have good instrumentation."

He read my array in four seconds. He did not introduce himself or ask for context or wait for a briefing. He just read it.

I have met three people in my professional life who read data that fast. One of them left on a Tuesday.

I am not thinking about that.

"The fracture system on the northwest Cassin flank is the origin mechanism," I say. "We mapped it five weeks ago. The amended hazard assessment is filed with the federal agency — reference number —"

"I read it on the flight," he says. "Your SO2 flux analysis is the best field work I have seen on a Cascade-adjacent system in a decade." He looks at me directly for the first time. Not the array. Me. "You mapped this before it moved."

"Yes," I say.

He is looking at me the way the mountain looks when it has decided to show you something.

I can run this briefing at professional distance the way I run every federal response. Or I can run it the way I actually work — directly, completely, with full data on the table and no management of what it means.

Both are available. Both are appropriate.

My body has already made the decision.

"Pull up the fracture system overlay," I say to Marco. "The full northwest approach mapping from the field study. All ten days of

data."

Marco pulls it up.

Reid Castor steps up to the display — not beside me, not asking permission, just moving to where the data is the way a scientist moves to where the data is — and looks at ten days of SO2 flux and GPS deformation and hypocenter mapping and the fracture system running northeast toward the Ridgeback corridor.

He is quiet for a long moment.

He is reading it the way it deserves to be read. Not fast. Completely.

"This fracture system is longer than you mapped it," he says. "It does not terminate at the Ridgeback corridor. It runs under it." He points at the northeast terminus of the overlay. "What is your instrumentation coverage here."

I look at where he is pointing.

He is right. The sensor coverage in that quadrant is insufficient and he identified it in ninety seconds from a display he has never seen before.

"Insufficient," I say.

"We need a sensor deployment in that quadrant within forty-eight hours," he says. "Before the aftershock sequence loads that segment."

"Agreed," I say.

He looks at me. I look at him. The monitoring room runs at full emergency around us and the aftershock sequence decays on the primary array and the city outside does not know what is sitting under it.

The ground moved twice today.

The Ridgeback at 11:14.

And this.

I am a volcano. I know what it feels like when something builds that the surface is not showing yet.

The ember catches.

CHAPTER

17

Petra's apartment is green from the door to the back wall and she has made something in a pitcher that is also green and Nell is already on the couch with her shoes off and Joanna is at the kitchen counter cutting limes and I walk through the door and Petra looks at my face and says —

"Who is he."

Four seconds. A new record.

"His name is Reid Castor," I say. "He arrived yesterday at 1700 and he is six feet two and he read my entire array in four seconds and I have not stopped thinking about him since."

Joanna puts down the knife.

Nell sits up straight.

Petra pours the green thing into a glass and hands it to me.

"Start from the beginning," she says.

I start from the beginning.

The monitoring room at 1700. The way the room changed when he walked in. The way he looked at the array and then looked at me.

"What does he look like," Joanna says.

"Fifteen miles of rough road," I say. "Handsome rough road." I take a drink. "Great jaw."

Nell makes a sound.

"She said jaw," Joanna says.

"I heard jaw," Petra says.

"He identified an instrumentation gap in my fracture system coverage in ninety seconds," I say. "From a display he had never seen before."

"She is gone," Nell says. To Petra. As if I am not present.

"Completely gone," Petra says. Happily.

I do not argue.

Two green drinks in and I am on Petra's couch describing Reid Castor's hands.

His hands.

"We are doing a sensor deployment tomorrow," I say. "0600. He identified a quadrant the fracture system runs under that we missed. Forty-eight hours in the field."

"Tomorrow morning at 0600," Joanna says.

"Yes," I say.

The three of them look at me.

“He has no permanent address,” I say.

“Of course he doesn’t,” Nell says.

“He goes where the fault goes,” I say.

“Of course he does,” Petra says.

I cannot locate my list of reasons why this is complicated.

Nell refills the pitcher. Petra puts something on the speakers. Joanna finishes the limes. The four of us settle into the evening the way we always do.

“Petra,” I say. “Daniel.”

Petra looks at her green drink.

“Daniel is in Oslo,” she says.

“He has been in Oslo for three years,” I say.

She says it again but differently. Like she is deciding if it is still true.

“Curtis asked me to dinner,” Joanna says. Very casually. To the lime.

The room erupts.

“What did you say,” Nell says.

“I said yes,” Joanna says. Still casual. Smiling at the lime.

Nell looks so happy.

Three drinks in and I am still talking about Reid Castor.

Should I stop being excited and just be normal.

I choose excited.

"I am actually happy," I say. "I am telling all of you that."

Nell squeezes my arm.

Joanna refills my glass.

Petra raises hers.

"To the Ridgeback fault," Petra says. "For terrible timing and excellent taste."

We drink.

0600 tomorrow. Reid Castor. The fracture system that runs under everything.

I am not subtle and I do not care.

CHAPTER

18

0600 and Reid Castor is already at the equipment staging area when I arrive.

He is looking good.

He has the sensor housing open on the tailgate and he is checking the internal calibration the way you check it when you have placed enough of these in enough places to know exactly what a field failure looks like and exactly how to prevent it. He does not look up when I walk over. He hands me the calibration readout.

I read it. Correct on all channels.

"Good," I say.

"Good," he says.

Very good.

The city is quiet at 0600. The Ridgeback corridor is eleven kilometers northeast and the aftershock sequence is still decaying on the array back at the monitoring room where Roy is drinking correct coffee and watching the data and pretending he does not know exactly where I am and why.

The deployment site is a dry creek bed at the northeast terminus of the fracture system — the quadrant Reid identified from the display in ninety seconds. On foot it is a forty minute approach through terrain that is uneven and cold and completely indifferent to the fact that I have been awake since 0430.

Reid sets the pace. Not fast. Efficient. The pace of a man who has covered ground on six continents and knows the difference between moving quickly and moving well.

I could watch him walk all day.

"The creek bed is the surface expression," he says. Moving. Not stopping to say it. "The fracture runs northeast under it for approximately three kilometers before it intersects the Ridgeback south corridor."

"The amended assessment puts the intersection at two point eight kilometers," I say.

"Your amended assessment is missing the last two hundred meters," he says.

I do not mind being corrected by that jaw.

First sensor placement at 0820.

Reid does the housing. I run the cable. We work without talking because the terrain requires attention and because we have been in the field for two hours and the work does not require narration.

His hands on the sensor housing.

I am a professional.

"P-wave window opens at 0900," I say. "We will get the first transmission to Roy by 0915."

"Run a noise floor check first," he says. "Creek bed substrate picks up surface interference. I want a clean baseline before the window opens."

"Already in the protocol," I say.

He looks at me.

Half a smile. Just half.

"Of course it is," he says.

The other half of that smile could power the entire array.

0915 and the first transmission comes through clean. Roy confirms on the radio.

Second sensor placement is two kilometers northeast. We eat lunch on a flat rock above the creek bed with the city visible in the southwest and the fracture system invisible under our boots and the Ridgeback corridor three hundred meters ahead.

"How long have you been independent," I say.

"Eight years," he says.

"What made you leave."

He looks at the city for a moment.

"Institutions protect themselves," he says. "Faults do not care about institutions." He takes a drink of water. "I go where the fault goes."

He goes where the fault goes.

I choose excited.

Second sensor placed at 1340. Transmission clean. Roy confirms.

We are packing the equipment when Reid stops and looks at the northeast terminus of the fracture system.

"There is a third placement," he says.

He is right. And he knows he is right. And he is looking at the terminus like that.

"The protocol covers two placements," I say.

"The protocol covers what you knew before I read your display," he says. "The third placement gives you complete coverage of the intersection."

Another two hours. Failing light. Forty minutes back to the truck.

Two sensors give us good data. Three sensors give us everything.

Also he is not done for the day and neither am I.

"We place the third sensor," I say.

Reid looks at me.

The full smile. Finally.

"Good," he says.

We place the third sensor in failing light on terrain that does not care about either of us and Reid does the housing without rushing and I run the cable without approximating and at 1648 the transmission

comes through clean and Roy confirms receipt and the northeast quadrant of the Ridgeback fracture system is fully instrumented for the first time since the mountain told us it existed.

"Complete coverage," I say.

"Complete coverage," he says.

We pack the equipment in the dark. Forty minutes back to the truck. The city lights coming up in the southwest.

His shoulder is six inches from mine the whole way back.

Six inches.

I am not subtle and I do not care.

CHAPTER

19

Reid Castor asks me to dinner on a Friday morning in the monitoring room in front of Roy and Marco and Petra and the entire primary array.

Not quietly. Not with any apparent concern about the audience.

"Dinner tonight," he says. Looking at the aftershock decay data on the main display. "Somewhere in this city that is not this building."

Roy becomes very busy with the printout filing system.

Marco suddenly needs to check the exterior sensor array.

Petra does not move. She is looking at her seismic data with the expression of a woman who is absolutely not listening.

"Yes," I say.

Reid looks up from the display and smiles.

"1900," he says. "You pick the place."

Petra turns a page.

I pick a restaurant on the river. Not near the bench. A different stretch, east side, tables outside on a Friday night in late March when

the weather cannot make up its mind.

Reid arrives at 1900 exactly.

He cleaned up nicely.

"You look —" he starts.

"The table is outside," I say. "I hope that is fine."

He smiles. "Outside is always fine," he says.

We order. We eat. The river does its river things twelve feet away and the city is loud enough to feel alive and quiet enough to hear each other.

He tells me about the Cascadia event three years ago. Standing in the rubble of a coastal community at 0400 with the aftershock sequence still running and the structural assessment team asking him what the ground was going to do next.

"What did you tell them," I say.

"The truth," he says. "Which they did not particularly want at 0400 but needed anyway."

"Where do you go after this," I say.

He looks at me across the table.

"I do not know yet," he says.

I choose excited.

The wine is correct and Reid is telling me about a fault deployment in New Zealand where the sensor equipment failed on day three and they rebuilt the array from components sourced from a

hardware store in a town of four hundred people.

"Did it work," I say.

"Well enough," he says. "The data was not clean but it was honest."

I like that very much.

"You could base somewhere," I say. "A city. A monitoring company. Stay in one place."

He looks at the river.

"I could," he says.

He looks back at me when he says it.

The check arrives. The river is dark. The city has gone full Friday night around us.

He is going to kiss me.

I can wait.

I have never been good at waiting.

I lean across the table.

Reid pulls back just enough to look at me.

"I have been wanting to do that since day one," he says.

"Day one was two days ago," I say.

"Yes," he says. "It was a long two days."

We stay at that table until the restaurant politely stops pretending it is not closing.

Outside on the river walk he looks at me and says —

"Tomorrow night. Dinner and dancing."

Not a question.

"Yes," I say.

On Saturday morning I walk into the monitoring room and Petra looks up from her data and says —

"Well."

"Well," I say.

She smiles and goes back to work.

CHAPTER

20

Saturday night and Reid picks me up at 1930 in a truck that has seen six continents of field work and does not apologize for it.

He opens the door.

"Where are we going," I say.

"Dinner first," he says. "Then I found a place."

"How did you find a place," I say.

"I asked Roy," he says.

Dinner is a small Italian restaurant three blocks from the river that I have walked past for six years and never entered. Red checkered tablecloths. Candles in wine bottles. A menu that is four items long and correct about all of them.

"Roy has good taste," I say.

"Roy has excellent taste," Reid says. "He also told me you like the linguine."

We eat. We talk. Reid tells me about his first independent deployment — a magnitude 5.8 in Oregon, fresh out of his institution,

no team, just him and a rental car and four seismometers.

"Were you scared," I say.

He thinks about it honestly.

"No," he says. "I was exactly where I was supposed to be."

"And now," I say.

He looks at me across the tablecloth and the candle.

"Still exactly where I am supposed to be," he says.

The place Roy found is a dance hall six blocks east. Not fancy. Wood floors and a live band and couples who have been coming here long enough to know every song before it starts.

Reid walks in like he has been here before.

"Do you dance," I say.

"Adequately," he says.

He takes my hand and leads me onto the floor and adequately turns out to be a significant understatement delivered with complete awareness that it is a significant understatement.

Between songs we are at the bar and the band starts something slow and the couples around us settle into it.

"I have been thinking about stopping," Reid says.

"Stopping what," I say.

"Moving," he says. "I have enough saved. I have been on every fault system worth standing on. I want to paint. Write up fifteen years

of field notes into something useful." He looks at the dance floor. "Find a city worth staying in."

"What does a city worth staying in look like," I say.

He looks at me.

"Active fault system," he says. "Good instrumentation. Somebody who knows what the mountain is actually saying."

The slow song is still going and Reid puts his hand out.

A man who wants to stop moving. Who wants to paint and write and stay.

I can let that information sit between us carefully the way careful people let information sit.

Or I can take his hand and dance and let the rest of it be what it is going to be.

The band is not going to play this song twice.

I take his hand.

The wood floor. The band. The couples who know every song. Reid with his hand at my back and the city outside doing its Saturday night things without us.

We stay until the band stops. We walk back along the river in the dark and Reid's hand finds mine without either of us deciding it.

At my door he looks at me.

"Same time tomorrow," he says.

"Yes," I say.

CHAPTER

21

Reid picks me up at 1930 on a Saturday and will not tell me where we are going.

He takes me to a comedy club on the west side — fancy with a big audience, everyone got a handout. We get a table near the back with two drinks and a menu that has a funny maze on it.

"Petra told me about this comedian," Reid says. "Danny Rosenberg."

Danny takes the stage and starts his routine. "Grab an imaginary feather and point it at your imaginary amygdala in the middle of your imaginary head. Like this. Now tickle the imaginary amygdala and laugh. Like this. Ha ha ha ha ha. Continue tickling and laughing."

People everywhere are tickling and laughing. I cannot keep from laughing when I see Reid doing it.

Danny calls out, "If you can't stop, keep going. It is so much fun, I can't stop. If you need to know — I spent six weeks once a week seeing a shrink called the EXPANDER. All he did was give me an index card with a picture on it. Told me what to do and why it was good for me. He told me to practice it and come back next week."

Danny continues. “Everyone of you who came here for inner guidance — you’ve come to the right comedian. I had to use a finger labyrinth. Still do. Don’t look now but you got a free one just for laughing at me.”

I look at Reid. He is moving his fingers around the labyrinth on the handout.

Danny continues. “I see some of you out there can’t wait to find inner peace. How would you like standing barefoot in the mud watching the sunrise? Cock-a-doodle-do.”

Danny starts humming way back in his throat. “This is called the bee buzz breath. Believe it or not it makes you smarter. Especially if you laugh at your own jokes. Buzz and tell yourself a joke and laugh. Try it.”

People everywhere start buzzing and telling themselves jokes and laughing.

I look at Reid. He is buzzing. He says, “What did the earthquake say to the volcano — it was my fault.” Then he starts laughing.

I cannot help but laugh.

Danny continues. “The Expander gave me the fifth card, the next to the last card. On it was written Life Is Meant To Have Fun. He said it was its own reward.”

“On the last card was written Love Gratitude Joy Inspiration. The Expander explained that it was a powerful force field that makes all life better. He asked me to look at the card from time to time. Love Gratitude Joy Inspiration. Goodnight.”

Reid is looking at the words in the handout.

Love Gratitude Joy Inspiration.

The room is still laughing and applauding and Danny is taking his bow and Reid is looking at those four words the way he looks at data that means something.

"You have seen this before," I say.

"Portland," he says. "Three years ago. Six weeks. Every card." He looks up at me. "The finger labyrinth is real."

I can let this be a comedy show — a good night out, Danny Rosenberg, Petra's recommendation.

Or I can let it be what it actually is.

We walk out into the night. Reid takes my hand.

"What did the earthquake say to the volcano," I say.

"I love you seismically," he says. "You make my bees buzz."

I hear myself say, "Life is meant to have fun. I love you too."

He cups my face in his hands and kisses me. A long welcomed kiss.

Reid pulls a card from his jacket's breast pocket. It is a Love Gratitude Joy Inspiration card. He says, "I'm caught in your force field."

We walk until we find a place still open and sit across from each other with coffee and our handouts on the table between us and we trace our labyrinths with one finger.

Reid speaks first. “You know what I like about the Expander cards? They are so easy to do with tremendous benefits. It is like falling in love.”

I look at the handout and start reading aloud.

"For entertainment purposes only.

Together the six practices build a complete system for human flourishing.

Body: Resets natural rhythms, strengthens immunity, relieves stress, and boosts both brain and gut health.

Mind: Builds new neural pathways, enhances resilience, and unlocks flexible, self-directed emotional regulation.

Heart: Opens pathways to joy, strengthens social bonds, and amplifies healing, connection, and transformation.

Spirit: Centers mind and body, fosters calm clarity, invites everyday inspiration, and cultivates an energetic relational field that upgrades all life."

Reid says, “Sounds like it does everything falling in love does. I love you Sloane.”

“Reid, I love you too. I have been caught in that force field since before I ever saw you.”

“I am serious, Sloane. I love you.”

“I am serious too, Reid. I love you.”

We rise together and our lips meet.

CHAPTER

22

Roy's place on a Saturday night and there is a new big digital sign over the entrance.

LAND OF A THOUSAND DANCES

Different dance names flashing one after another. Jitterbug. Lindy Hop. Charleston. Twist. Hustle. Electric Slide. Cotton-Eyed Joe. The list keeps going.

Reid stands on the sidewalk reading the sign.

"Roy outdid himself," he says.

We walk in.

The Time Warp is already playing.

It's just a jump to the left.

Reid jumps to the left.

And a step to the right.

Reid steps to the right.

I cannot help it. I jump to the left.

The whole room is jumping to the left.

We never make it to a table.

The Time Warp gives way to Paradise by the Dashboard Light and the room loses its mind. Every person on that floor knows every word including Reid Castor. He knows every word and is not embarrassed about it at all.

We are at the part where the baseball announcer is calling the bases and the whole room is shouting along and Reid leans over and says directly into my ear —

"He's rounding third."

"Do not say it," I say.

"He is going for home," he says.

The room erupts.

So do I.

Paradise fades and the band pauses and the digital sign flashes the next dance.

CHICKEN DANCE

The room cheers.

Reid looks at me.

"You know the Chicken Dance," I say.

"Chile," he says. "Wedding. Four hundred people. I told you."

The accordion starts. Reid tucks his thumbs in his armpits without hesitation.

Beak. Wings. Tail feathers. Clap clap clap clap.

I watch Reid Castor do the Chicken Dance with the same precision and complete commitment he brings to placing broadband seismometers on technical terrain in dropping visibility.

I have to sit down.

"You are supposed to be dancing," he says. Still flapping.

"I am having a moment," I say.

"Beak," he says. "Wings. Tail. Clap."

I get up and do the Chicken Dance.

The Chicken Dance gives way to the Electric Slide and then Cotton-Eyed Joe and then the Boot Scootin' Boogie and then the Macarena and Reid does every single one with the same straight face and complete competence and somewhere between the Macarena and the Hand Jive I realize I have not thought about the monitoring room or the array or the mountain once tonight.

The YMCA.

Reid spells it out with his arms.

"New Orleans," I say.

"Wedding," he says. "Different wedding. Smaller. Only two hundred people."

The band announces the Hokey Pokey.

The floor erupts.

You put your left foot in.

You put your left foot out.

You put your left in and you shake it all about.

We put our right foot in.

We shake it all about.

We are out of our minds.

Life is meant to have fun.

The Hokey Pokey gives way to the Watermelon Crawl and then the Hand Jive and then the band slows and the digital sign stops flashing and just holds two words.

LAST DANCE.

Couples find each other on the floor.

Reid pulls me in and we dance the last song slow in the middle of the room.

It's Elvis. Can't Help Falling In Love.

CHAPTER

23

There he is. I run and jump into his arms. Our lips meet. They don't let go.

"I love you Sloane."

"I love you Garrett."

My heart is bursting. My head is spinning. My body's shaking. It's not a dream. Garrett is back. He's holding me in his arms. I'm in love with Garrett.

It's Tuesday morning. The array is running. Roy has the coffee. Petra is at her desk. The door is open. Reid is in the field. I'm in love with Reid. I'm in love with Garrett.

I'm torn between two lovers.

Roy looks at us. I'm still in Garrett's arms. Roy looks at his coffee.

Petra looks up. Looks at Garrett. Looks at me. Goes back to her data.

Marco keeps his eyes on the display.

Reid comes through the door.

I instinctively go to him.

We embrace.

“I love you Sloane.”

“I love you Reid.”

Again my heart is bursting and my head is spinning. My body’s shaking.

I’m torn between two lovers. I have to choose one. I can’t have both.

My heart says Garrett. My instinct says Reid.

I blurt out, “I love you both.”

Garrett stands by the doorway. Reid stands by the coffee.

“Reid,” I say. “My heart is with Garrett.”

“Say no more, my love.” Reid nods and turns to analyze his field work.

I go to Garrett.

He takes my hand and says, “Let’s go get married.”

CHAPTER

24

This may sound like a family Christmas card. What a difference fifteen years make. Time moves so fast.

We, the Garrett Holloway family, live on our ranchette where we have our monitoring company. Our five children are the twins Carl and John age 13, Henry age 10, Naomi age 8, and Barbara age 6.

The family has four horses, three dogs, three cats, three domestic Optimus robots, and twelve business Optimus robots.

Carl and John have taught five of the robots to ride and groom the horses. The robots think the horses are theirs to ride whenever they want. I can't keep up with those two. They have their robot friends planting and caring for their garden.

Garrett drives to the staging area three mornings a week and deploys his robot family to the field. Twelve Optimus units. Sometimes he leaves four of them home for the kids to play with. A drone swarm that covers Cassin's northwest flank in forty minutes. Sensor placements that used to take four people three days in dropping visibility now take two hours and nobody gets wet.

They know every location by heart. He sends them where he used to stand.

I work from home. I manage the incoming data on a screen that covers an entire wall and write love stories at a desk by the window while the children move through the house like their own seismic event.

My first book has been on the shelf for two years.

Some People Know What The Ground Is Doing.

A love story.

Our close friends Reid Castor and Petra Voss have a ranchette right next to ours. They have three children. I see them standing barefoot watching the sun come up. If the wind is right I can hear them bee buzzing and laughing.

Reid paints in the mornings. Barefoot. He finished his field notes two years ago. His book came out six months after mine.

Cassin is still pulling its tricks. The way mountains go quiet before they do something significant. The drones watch it around the clock. Petra and Reid help out when things get interesting.

Tom Ashford and Deb Farris married the year after we did. They are somewhere in the world right now with their children. Tom has been talking about going to Mars. Knowing Tom I would not rule it out.

Marco Tate joined Diane Rell's institution group.

Roy retired to his dance hall business.

The only dilemmas I have to solve now are how to raise the kids and their robots.

What it looks like is the kids are raising the robots and the robots are raising the kids.

Love Gratitude Joy Inspiration.