

**In Alan Smale's *Clash of Eagles* trilogy, he imagines an attempted Roman invasion of North America during the height of the Mississippian culture; the concluding volume, *Eagle and Empire*, appears in May from Del Rey. Alan's previous stories for *Asimov's* have taken us to a war-ravaged future Mongolia and the hidden horrors of pastoral England. Here, in his third tale for us, he returns to American shores for an uplifting alternate look at the dawn of flight.**

# KITTY HAWK

**Alan Smale**

**K**atharine had expected the remoteness and bracing winds, but she had never pictured a landscape quite as desolate as this.

The sandbar was barely two thousand feet wide, but ahead of her it appeared to stretch away into infinity. Aside from a few scraps of scrubby grass, the only hint of vegetation was a faint line of trees many miles south, close to the promontory that must be Nag's Head. But between her and the promontory all was sand and dirt, a huge expanse of dunes, bleak and harsh.

A few hundred yards to her left, the green Atlantic pounded the beach. Spray and foam leaped high, and even from here she could feel its dull roar. Off to her right was another dreary stretch of water, the wind-whipped Albemarle Sound. In the distance beyond was Roanoke Island, the site of an ill-fated English settlement over three hundred years before. Katharine had not known that it would be visible from here. The echoes of ancient disaster were a little unsettling.

Perhaps this would all seem inviting in the heat of summer, like an endless beach. In late October, though, with a storm recently over and a moderate gale still blowing, Katharine felt chilled, sodden, and decidedly dour. Her patent leather boots were sopping wet, and her gray traveling cloak was quite insufficient to keep the elements at bay.

And that was merely the immediate discomfort. It made no account of the solid lump of grief in her bosom, and the sick apprehension in the pit of her stomach at the thought of the reunion to come.

She trudged on, and as she topped a low dune, the camp came in sight. Just two wooden frame huts with tar-paper roofs, side by side in the middle of nowhere, but neater and more recent in construction than the unlovely houses in the village of Kitty Hawk four miles behind her. One hut would be the workshop where her brothers worked, ate, and slept. The larger hut, she knew from their letters, served as the hangar where they stored and maintained their gliders, and now the Flyer.

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Mentally, she corrected herself. There was no “they” any longer. No “brothers.” Only one remained.

Steeling herself, Katharine walked on. If nothing else, it would be a relief to get out of this infernal wind.

The larger hut looked to be closed up tight. The door of the smaller was open, and she could see someone bustling around within.

Now he came out and stared, hands on hips. Katharine drew to a halt ten feet away, unsure of her reception.

Orville Wright was slight of build and stood around five feet eight inches tall. At thirty-two years of age, three years Katharine’s senior, his dark hair was already receding from his brow, but his mustache was reddish and well trimmed. Even out here in the wilds he wore suit trousers, a white shirt with a starched collar, and a black necktie. He wiped oil from his hands with a rag, but otherwise was as immaculate as always.

Orville blinked, shook his head. “Sterchens?”

Her pet name from when they were children, still used jokingly into adulthood. It meant “little sister” in German. “Good afternoon, Orville. Had you, perhaps, forgotten to expect me?”

“I suppose so.” He looked around uncertainly. “You are not at school?”

“I took an emergency leave of absence. You did not get my telegram?”

“I am not sure,” Orville said evasively.

Katharine taught first- and second-year Latin at the Steele High School in Dayton. As a graduate of Oberlin College—the only member of her family with more than a high school education—she might have been teaching the higher years Latin, and Greek too, if those classes were not reserved for the male teachers. Thus, she’d had little guilt about walking out and letting those worthy gentlemen decide who would substitute for her. Much more guilt about abandoning Father in his grief and distress, but their maid Carrie Kayler could tend to him well enough in Katharine’s absence.

Clearly, all was not well with Orville. His clothes might be perfectly turned out and his cheeks well shaven, but his face was sallow under its weathering from the wind and sun, and dark bags hung under his eyes. Those eyes darted everywhere, and his mouth was set into a hard line quite at odds with his usual intense but cheerful personality.

Faced with her silence, he appeared to pull himself together. “I apologize. I have not prepared . . . and if I had, I do not really know *what* I might have prepared.”

Katharine forced her voice to be gentle. “I suppose there may be tea, and a chair?”

“We certainly might stretch that far.” Orville caught himself. “I mean, *I* might.”

He turned and walked into the hut that the brothers had used as a workshop and living space. She heard banging, and the sound of metallic objects being swept into a tray.

Taking a deep breath, Katharine followed him inside.

The workshop formed by far the larger part. Along one wall lay a biplane glider, patched and dilapidated, thirty feet in wingspan. In the corner where Orville now stood was a small kitchen area. Above her head in the rafters were two beds, neatly made up, and beside her was the ladder to get to them. But the whole center of the single-roomed hut was dominated by tables and work benches containing a mess of spars, ribs, cloth, and wire, an open toolbox, and beyond the toolbox a lathe and a pedal-operated sewing machine with a broad swath of unbleached muslin threaded through it.

“You are still hard at work, Orv?” Katharine said in disbelief.

Orville poured water from a none-too-clean bucket into an open kettle. Lifting it onto the stove, he turned on the gas and struck a match. The stove lit with a fervent *whomph*. “Do not be angry with me. I do not know what else to do.”

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"Perhaps you could attend to . . . other business. Orv? Where is Brother?"

"He is gone, Kate. Dead and gone. Did they not tell you?"

"Of course I—" Katharine broke away, biting back her anger. Obviously she knew. Why else would she be here? She had never visited Kitty Hawk before, never come east in her life until now. "Orville, my love, have you slept? At all?"

She turned back to him. Orville had picked up a rasp and gone back to his work while he waited for the kettle to boil. He was filing a rib, one of the pieces of wood that formed the internal frame of a wing. "Orv, stop. Talk to me."

"There is much to do, and now only I to do it."

"Orv, we must take Brother home to Dayton, and quickly. Where is . . ."

All his attention was on the ash-wood rib. She strode to him, plucked the rasp from his hands and threw it aside. "Damn it, Orville Wright, where is our brother's body?"

"Already en route." Reluctantly, Orville put the rib down. "The men of the Life-Saving Station, on the beach close by . . . they have experience in such matters, from dealing with those who die on the high seas. They crated Brother up and bundled him off on a boat to Elizabeth City with all the forms properly filled out and the appropriate funds for the railway. Yesterday? The day before?" Orville looked vague. "Anyway, if he had not arrived in Dayton by the time you left, you must have passed each other on the rails."

Katharine stared. "You sent him alone?"

In a way, it was a relief. One less thing for her to arrange. In another way . . . it was horrible. Heartless.

The kettle whistled. Katharine stepped away from Orville before she felt compelled to shake him and walked into the kitchen area.

On the shelves above the gas stove the canned food was arranged meticulously, labels aligned and pointing outward. She saw Chase & Sandborn coffee, Arm & Hammer baking soda, Royal Purple tomatoes, Gold Dust Green Gage plums. Below them, cooking utensils and crockery were displayed with similar neatness and order. Everything was scrupulously clean. She located tea, teapot, and mugs and busied herself with domestic matters to still the turmoil in her mind.

Now that Katharine was no longer in the wind the mosquitoes found her and dove for her head, whining. As she batted at them she caught Orville's half-grin out of the corner of her eye. The brother she knew had not completely evaporated, then. "How do you bear them?"

Orv raised his hands. "I rather tend to cover myself in engine grease and linseed oil."

"Tell me what happened?" She held out a mug. "Orville, it's tea time. Sit, and tell me the whole story."

Wilbur Wright had been tall but lean to the point of gauntness, long of face, and

"In 1988 I arrived in the U.S. to take up a job at NASA's Goddard Space Flight Center. In one fell swoop I left family and friends behind and switched from pure astronomy research in rural Britain to working on a Space Shuttle payload in the D.C. metropolitan area, a strange and alien environment. But I didn't do it alone. With me (in a manner of speaking) came Jim Kelly, Connie Willis, Lucius Shepard, Nancy Kress, Robert Silverberg, John Kessel, Michael Swanwick, Kim Stanley Robinson, and many others. My *Asimov's* subscription was one of my few constants during that turbulent time, and consistently reading stories of such quality was like a master-class in writing short fiction. I made my first pro sale in 1993, and my first *Asimov's* sale in 2012. The magazine has been with me for the best years in my life, and I wish *Asimov's* the best of luck for its next forty years of literate, imaginative, provocative, and always inspiring SF and fantasy."

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balding. Orville was shorter and a touch stouter, but had a more playful mien and smiling eyes. At home Orville played the mandolin, an instrument too frivolous for Wilbur, and was known to occasionally flirt with Katharine's friends, a skill that Wilbur did not possess. Both were dapper and neat to a fault, but Orv with his lighter colored suits and snappy argyle socks over wingtip shoes was the better dresser.

Yet the brothers were much more similar than they were different, in speech, expressions, and movement. So much so that even talking to Orville increased Katharine's grief at losing Wilbur a hundredfold. Also, Will and Orv had been inseparable: wherever you found one, the other would be right beside him or not too far behind. Four years apart in age, they were nonetheless closer than most twins of Katharine's acquaintance. They had worked in their bicycle shop together, they had come home together, had talked constantly together through the evening. To sit here speaking calmly with one, in the sure knowledge that she would never see the other again . . . well, Katharine had to struggle to retain her equanimity, and was glad of the mechanics of tea-drinking to disguise her emotions.

The telegram that Orville had sent from the Weather Bureau office at Kitty Hawk four days earlier had been necessarily terse: Wilbur had crashed and had not survived, it had been quick, he had not suffered. Yet even the full tale was brief enough in the telling. Orville and a pair of men he referred to as "the Tates" had thrown Wilbur aloft in their glider from the top of the hundred-foot dune they called the Big Hill, just in time for the prevailing wind to swing disastrously to the east. Wilbur had banked left to steer into it but had somehow unbalanced the wing. He had raised the nose of the craft too far, and stalled. The glider had slipped backward in the air and plummeted to the Earth from a height of some fifty feet.

Even then Wilbur might have survived the impact, had his right wing not dipped into the sand and flipped the entire glider end over end in a mad cartwheel.

At least, this was the best sense that Katharine could make of it. Perhaps in an effort to maintain emotional detachment, Orville had peppered his account with so much technical jargon that it obscured much of the detail.

Perhaps that was for the best. Suffice to say that Wilbur had made a poor landing and broken his neck, and it had all been over in less time than it took to tell.

The irony was acute. It had always been Wilbur who had solemnly promised their father, a bishop in the United Brethren Church, that he would take few risks in his aeronautical endeavors: he had "no intention of risking injury to any great extent and no expectation of being hurt."

For once, the brothers' expectations had not been met.

"And so the Flyer is destroyed?" she said.

Orville frowned. "You were not listening? It was the glider. Last year's glider, on which we were refining the rudder control." Katharine glanced at the entirely whole glider that lay along the wall behind her, and exasperation crept into Orville's voice. "Katie, my goodness. *That* is the glider from the year before, much smaller . . ."

"Of course it is," she said.

"As for the Flyer, the propellers are still not quite right. Also, misfiring of the engine can cause the sprockets in the transmission to loosen. Those were the conundrums we were resolving in the meantime."

At last it sunk in. Katharine put down her tea mug and leaned forward. "Orville. You plan to *proceed*?"

His face turned dark. "Langley must not win."

"Langley?" The name had come up in conversation around the dinner table at 7 Hawthorn Street often enough, but Katharine had disregarded it, as she frankly disregarded much of what Wilbur and Orville said during their interminable discussions of flying. "A competitor?"

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Orville stood and paced to the door of the hut and back again, restless, predatory. "Samuel Pierpoint Langley, Secretary of the Smithsonian. Even now he attempts to fly the craft he calls his Aerodrome, to carry a man." He shook his head. "Langley has no conception of how to warp a wing to control the attitude of a flying machine. His engine is much too heavy. He lacks the courage to fly his own craft, and thus employs a lackey to do it in his stead. Yet he has spent over fifty thousand dollars of taxpayers' money in the attempt. He is a ridiculous man, and he will never succeed."

"Then he is hardly a competitor," Katharine objected.

"Which does not mean we do not have to beat him, and soundly."

She waited, mute.

"I," Orville amended with regret. "Not 'we.' It is now I alone, and it will never be 'we' again. That will take a great deal of getting used to." He turned again, and tears were pouring down his cheeks.

Katharine had not seen Orv cry since their mother passed away in 1889, and then he had been a youth of only seventeen years. Today, the sight almost broke her.

Yet Orville was still ranting rather than grieving. "It isn't just Langley. Europe holds countless other would-be aeronauts. Since Lilienthal, the flying bug has bitten and taken hold. Wilbur and I are ahead by far, we have grasped the principles of control that no others seem to fathom. And more: the tables of lift and drag they all use, of Lilienthal and Chanute? Those numbers are all wrong. Ours are accurate, that Wilbur and I spent the winter refining in our wind tunnel at 7 Hawthorn."

Katharine well remembered the six-foot box the brothers had spent hours playing with, and especially the noisy, stinky gasoline engine they had used to blow air through it. "Of course, but—"

Orville stopped right in front of her and leaned down, wild-eyed. "I cannot return to Dayton without putting the Flyer to the test. Having come this far, I simply cannot. I must do it for Wilbur as much as for myself. And if you knew us at all, Katie, you would understand that."

Despite the tea, her throat was quite dry. "How long?"

"However long it takes." Orville straightened. "I shall write to let you know how the work proceeds and will send a telegram to mark either success or abject failure. If possible, I shall be home for Christmas. After that, the weather will be too foul in any case. But I do not believe it will take that long."

Her heart chilled. "And Wilbur? What of his funeral? What of respect?"

Orville closed his eyes briefly. "Wilbur is beyond caring."

"And what of Father?"

"He will be just as sad, whether or not I am there."

Katharine stood abruptly. Her metal chair toppled backward with a clang. "You're a monster, Orv. You're just a selfish bloody monster, and I refuse to listen to this *crap* a moment longer."

Orville recoiled at her foul tongue, and Katharine marched out of the hut, slamming the door behind her.

Of course, dramatic exits apart, being out of doors had little to commend it other than the sudden solitude.

With the approach of sunset the wind had dropped, and the sand had taken on a faintly rosy tinge. She stomped around the larger hut, which she estimated at over forty feet in length and perhaps fifteen in breadth, without seeing a door. However did Wilbur and Orville—well, Orville—get into it?

No matter. Katharine took a trip to the seaside.

There was still nothing to see beyond sand dunes and sparse grasses. On the beach at what must be low tide, shells and the occasional stranded starfish formed

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the sum of the available entertainment. The sea still assaulted the coast, restless and turbulent, white-flecked.

Birds wheeled above her: gulls close by, mewling, while a turkey vulture soared higher, perhaps waiting for her to keel over and become dinner.

Once again she was struck by the bleakness and desolation of Kill Devil Hills. Truly, she was at the very edge of the world. Beyond it, perhaps, since the islands of the Outer Banks had no physical connection to the mainland. She walked further along the shore, trying hard to avoid the discomfiting notion that this whole chain of barrier islands might just founder beneath the waves at any moment. They seemed that precarious.

She did, however, notice another structure: the Life-Saving Station, a small two-story building that would be on the waterline at high tide. From a distance it appeared to be a boathouse with an upper level and a platform atop the whole. Manned by doughty surfmen during the day, maybe, but now deserted. She presumed they lived in Kitty Hawk along with the fishermen, and were now at home with their dinners.

Their dedication was admirable. Living here for a whole season, as her brothers had for the past four years running, would be quite beyond Katharine. She could barely endure this wasteland for a single day.

And she wouldn't have to. To get here, Katharine had traveled by train from Dayton, Ohio, to Old Point Comfort, Virginia, and then by steamship across the James River to Norfolk. She had boarded another train to Elizabeth City, North Carolina, and had finally been ferried along the Pasquotank River and across the sound in a rickety flat-bottomed fishing boat. The journey had taken three days. Now she would merely reverse the long process. She would return to Kitty Hawk first thing in the morning and pay a fisherman to take her back to the mainland. She would board the train and hurry to catch up with her beloved Wilbur.

Back in Dayton, they would bury him with the love and honor that was his due. And that would be that. Orville could come home for Christmas, or he could go hang.

Gallingly, she had to return to the workshop. But Orv made it easier for her by ringing a dinner gong, which was in this case a hammer whacked against a skillet.

He had cooked eggs, biscuits, and tomatoes. In Katharine's view this was breakfast food, not dinner, but she had already seen that the larder lacked imagination. She made no comment, instead making small talk about mutual Dayton friends. She ate gratefully and cleaned up, after which Orville briefed her in the use of the toilet facilities, the well, and the mosquito netting that hung over the bunks. Their conversation was neutral, if a little remote, and their previous argument was not referred to in the slightest.

A bed high in the roof was not entirely to Katharine's taste, but one situated on the floor where the scurrying varmints might find her would have been even less desirable. Orville's snores largely drowned out the rustling of the mice anyway.

Much to Katharine's surprise, she slept soundly. The journey must have sapped more of her strength than she'd realized.

She awoke to find herself alone in the shed, and daylight filtering through the gaps in the wooden planks of its walls. Outside, the wind whistled.

It was oddly peaceful, but very cold. It had been a four-blanket night. Once she roused herself out of bed and clambered down the ladder to the ground, she dressed quickly.

It was even colder outside. The wind surged over the dunes and blew sand into her dress. Katharine turned around in a complete circle, but still she could not see Orville . . .

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There, walking back from the seashore. He wore no overcoat against the elements, merely his usual suit over a white shirt and tie, and a derby hat that he had to hold onto his head to avoid it taking flight. He looked ridiculous, as if he had just strolled out of church on Sunday onto a busy Dayton street, and he seemed to feel ridiculous too, because when he arrived at her side his first words were: "I am an idiot, Katie, and I humbly beg your pardon."

He looked so downcast that she bit back a tart retort. "Why so?"

"Last night, hubris was talking. You were right. I had not slept in . . . so very long, and everything around me appeared bright and hot and obvious. That alone should have alerted me that I was gripped by a mania, not in my right mind. This morning . . ." He shivered. "Well, since you were here I was forced to lie still last night and sleep, and today . . . everything is very cold and clear."

She walked beside him as he ascended a dune, the largest. Although the wind would only be worse at its peak, Katharine hardly felt she could stop him. "And so?"

But Orville did not speak again until they were at the top. Before them spread the whole of the rugged scenery of Kill Devil Hills: dunes, sea, scrub grass, dunes, the sound, the Life-Saving Station, the Wright huts, and yet more dunes, all under a wide sky strewn with cumulus clouds and high cirrus.

Finally, he said: "I do so hate to be beaten, Sterchens. But beaten I am."

Katharine hugged herself against the cold. The wind blew strands of hair out of her bun and into her eyes. "Orville, speak plainly."

"Must I?" He sighed and scanned the pounding surf of the Atlantic, just a few hundred feet away. "Very well."

"We were together all our lives, Wilbur and I. Even as children, my toys were his and his were mine. We shared everything. Played together, worked together. Everything we have done our entire lives has resulted from discussions and debate between us. And when Wilbur and Orville Wright stood shoulder to shoulder, no problem could stand against us." He shook his head. "I alone? I am nothing. Much less than one half of the whole."

Katharine slipped her hand into his. "Ory, you are not alone. You are never alone."

"This is where he died, you know. We stood here with the glider, and then we ran. We released him southward, and just down there, the scuffed area down to the right? That is where Wilbur crashed. Where that fine, fine life was ripped away from him, and from us all."

Tears pricked Katharine's eyes. She bowed her head.

"I shall never come up here again. We will leave today. And I am most profoundly sorry for the diatribe I inflicted upon you yesterday."

"You will leave?"

"It will take me an hour to pack and shut up shop. No more."

Orville's face was as desolate as the landscape that surrounded them. And she could not bear it.

"If you did not leave," Katharine said slowly, "tell me again how long it would take us to prepare the Flyer?"

Orville laughed sadly, and squeezed her arm. "You would fancy to take his place in this, Katie? You?"

His gentleness wounded her more than his scorn ever could. "Not his place. Never Wilbur's place. But I could help."

"You can shape wood, then? Cut metal? Even tighten a bolt?"

Katharine glared, irritated now through her tears. "I am your sister, and I am Wilbur's sister. Can I not do anything I put my mind to?"

Orville looked away. "Of course you can. I'm sorry. But for now, let us go home and see Brother properly buried, and care for Father."

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The day before she had seen energy and passion in Orv's eyes. Today she saw defeat, and duty.

It would not do. It would not do at all.

"I am not leaving," Katharine said. "And neither are you."

Now, Orville put his fingers up to his temples. "Ach . . . Just like Will. He and I would argue so long that we each argued the other around to our point of view. The argument continued, having entirely reversed its course."

"Orv, what must be done? What first, what second?"

"No, Sterchens."

Katharine stamped her foot. It lacked impact in the shifting sands beneath her, so she bounced her fist off his arm as well. "Wilbur would never countenance defeat! It was your dream. Both of your dreams. And now I am here. So, for God's sake, buck up!"

Orville gave a low moan of exasperation. "Great Scott, woman! Where on earth did you learn to be so obstinate?"

"The same place as you, I'll warrant. Now come inside with me and make us some coffee."

Coffee in hand they went to the larger shed, the hangar, and Orville opened it up.

Katharine hadn't seen a door because there wasn't one. The entire end wall came up on a hinge; Orville raised it horizontal and propped it up with a long two-by-four, and it became an awning under which they could work.

And there in the shed was the glider that had killed Wilbur, and behind it the long shape of the Flyer looming under a tarpaulin.

To Katharine, the glider looked wrecked. Snapped, twisted, its back broken and its wings wrapped around itself in a mess of wood and wire. Orville laughed at her consternation. "See, these entire sections are whole in between the breaks. This is a day's work, maybe a day and a half if you are slow with a saw, plus another half-day to adjust the wire tensions and warping mechanisms to be just so."

"I shall not be slow, Orv, look to yourself . . . But why the glider and not the Flyer? Is not powered, controlled flight your goal?"

"Of course. But making the glider airworthy again is our essential first step. With the glider we learn and practice, until everything becomes instinctive. I would have to take the engine off the Flyer and half dismantle it in other ways to permit the same experimentation. No: we rebuild the glider, refine our tools, then launch the Flyer using the experience gained."

The idea of Orville flying aloft in the very machine that his brother had died aboard held no appeal for Katharine. And besides that, how could something so damaged-looking ever be trusted? Even if they fixed up the broken sections, might not the other areas of the wing have been profoundly compromised?

She felt her mercurial opinion swinging into disfavor of the project, but she could scarcely change her mind again so soon. She fingered the torn muslin of the lower wing. "Will we not be here until Easter?"

"Well, perhaps, if we don't get cracking. Now, come. Let me show you around the toolbox, and start you shaping ribs and spars."

Katharine picked up the knack of woodworking rather quickly. It was, after all, merely measuring and cutting and smoothing. If anything, it was easier than dress-making.

At least, in concept. That day she sawed and filed and oiled and hammered until her fingers bled, standing at the table in the workshop. Orville came back and forth between hangar and workshop with his list of piece sizes: a rib of such-and-such dimensions, a strut thus long, a small wooden block of this scale. He would take away



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the components she made, install them into the glider, then come back with more measurements.

In midafternoon he came in with requests for pieces of muslin of various shapes and sizes, and Katharine just stared at him, shaking the cramps and aches from her fingertips. She had always refused to sew for the boys at home, and today would be no different. Orville laughed and took up the shears and the sewing machine himself, instead handing her wire-cutters and a list of lengths of fifteen-gauge steel wire he would need to mend the truss that held the parallel wings together.

After ten minutes of wire cutting, Katharine rather wished she'd chosen the sewing, but at least Orv was in the hangar, out of range of her ardent and proficient swearing.

"And you are?"

Blunt vowels, a curt demeanor, and a hulking shape in the doorway between her and the dunes outside. She stood erect, wire-cutters still in hand. "I am Miss Katharine Wright, sister to Wilbur and Orville. And yourself, sir?"

The man pulled a flat cap off his head and stepped into the hut uninvited. Katharine resisted the impulse to take a step backward. "Bill Tate. Postmaster at Kitty Hawk."

The name rang a bell. "And your business?"

Orville arrived. "Katharine, where are the—Ah, Bill, good to see you. Some tea?"

Bill Tate looked dubiously at Katharine and at the mess of wires on the workbench. "Wouldn't wish to put you to any trouble, ma'am."

"Oh, she is busy." Orv walked to the stove. Firing up the gas, he set the kettle. "Or perhaps we could all use a breather. Bill, you have met my sister Katharine? She will be staying awhile. I'm afraid you're not shot of me yet."

Tate's eyebrows rose. "The work continues?"

"It does."

The postmaster nodded deferentially, almost touching his forelock, but looked bemused. "A word, then, sir? Outside, maybe?"

Orville nodded, and they left together.

"Well," said Katharine to the walls. She stepped up to the stove and made her own tea after all, but did not feel obliged to concoct any for the men who had eschewed her company.

Holy God in Heaven, it felt good to sit down.

Orville was back soon. "All settled. For now."

"Mr. Tate chooses not to stay for tea?" she said acidly.

"He will send his brother Dan over at noon tomorrow to assist." Orville cocked an eye at her. "Matters might go more swimmingly if you could control your . . . vocabulary. Bill is an upright fellow, with rather fixed notions of propriety."

Tired and aching, Katharine was inclined to tell Orville what Mr. Bill Tate could do with his propriety. Seeing her expression, Orville raised a hand. "I know. But without his help, and his brother Dan's, and eventually the men of the Life-Saving Station, nothing is possible. But today . . . just another half hour of labor? Then I shall cook dinner while you get some fresh air."

Orville was trying as hard as he could, and had done nothing wrong. Katharine swallowed her irritation. "That would be delightful. Thank you."

After dinner, in the waning light, they went to the hangar.

True to Orville's word, in a single day of intense activity the glider had been transformed.

Over the years, Katharine had paid less and less attention to the details of her brothers' gliders. This was at least the fourth such glider Wilbur and Orville had con-

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structed at 7 Hawthorn Street, and most of the time Katharine had just tried to stay out of the way of their arguing, the sawing and lathing, the constant clatter of the sewing machine.

This fourth glider, as she recalled, had been assembled in the backyard. Now she realized why this had been necessary. It was considerably larger than the last of their gliders that she'd examined closely, the craft they'd brought to Kitty Hawk in the fall of 1900.

Orville's eyes were upon her, his mood newly serious. She refrained from making any comment that might sound vacuous and walked along its length, studying it.

The glider was a double-decker, its twin wings stacked one above the other, held apart by stout wooden uprights and braced with diagonal wires. The wings were constructed of a lattice of wooden ribs, now clothed with a tight covering of Pride-of-the-West muslin, some of it stained badly and patched together with tacks. Many of the uprights and spars were dark with age, but others were of a lighter wood. Several of them, she had cut and smoothed just that day.

From the front of the machine extended the frame for a horizontal elevator, flat and elliptical in shape. Rods held by the pilot would tilt the elevator up or down, and so raise or lower the attitude of the craft in the air. To the rear, the rudder was a vertical fin five feet high. The wingspan of the beast was some thirty-two feet, the total length from the front tip of the elevator to the rear of the rudder perhaps seventeen feet.

In the center of the lower wing was a space eighteen inches wide. Here, the pilot lay prone to operate it in flight. And here was a contraption that looked a little like a medieval restraining device.

Orville noticed her gaze. "Aha. There lies the magic. You will remember our mechanism to warp the wings?"

Long ago, Wilbur had demonstrated it to her by twisting a flat, empty box. She experienced a brief but brutally sharp pang of grief at the memory and struggled to concentrate. "Of course. Warp a wing to curve it, and one side lifts preferentially in the air, banking the machine. And the rudder aids in this steering, just like a boat?"

"Mostly right . . . but not like a boat. Certainly we turn the craft using the mechanical warping, applying more lift to one wing than the other, just as you say." He tilted his hand in the air to demonstrate. "The roll provides the turn. But with the rudder you control the yaw, so as to aim the nose of the glider to restore stable flight."

He indicated the device that had caught her eye. "Both mechanisms are linked by wires to the hip cradle. A movement of the pelvis in flight simultaneously warps the wing and inclines the rudder."

"Ingenious," she said, and meant it.

"And thus, aerial stability in three axes," Orville concluded, with some pride. He pointed to the rods that led to the frontal elevator. "Pitch." Then to the cradle. "Roll. Yaw."

"Isn't that an awful lot to think about, all at once?"

"No more so than riding a bicycle, which is also inherently unstable. And you ride one of those with ease."

"Well, a bicycle is not twenty feet off the . . . Wait. I?"

Orville studied her expression, half-grinning. "Are we not partners, now?"

"By no means," Katharine said. "You are the madman. I merely the sister."

Orville nodded. "Perhaps I should explain in more detail. When Will and I were learning our art we flew the glider as a kite, with a sandbag in place of a pilot. We held the tethers from the ground, and warped the wings with control ropes while the glider rocked in the winds above us. That is where we will start tomorrow, studying

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the mechanics of flight from the safety of terra firma. Then, if you show any understanding of it, I may solicit the Tates, or a few men from the Life-Saving Station, to help me raise you aloft in it, in place of the sandbag."

Still vastly taken aback, Katharine riposted by trying to make light of it. "You plan to fly your beloved Sterchens like a kite?"

"Absolutely. And perhaps even set her to glide free. Katie, recall: I myself only glided for the first time last year. Before that, Wilbur served as our sole pilot."

She knew that from their letters, of course, but . . . "Then you have a year's expertise already under your belt."

"Last year we were here for little more than a month. I made hundreds of glides in that time, but I acquired the basic skill in days."

Orville spotted a loose wire and leaned in with his wrench to tighten it. "In truth, I propose this not merely from a spirit of camaraderie. Sometimes, I need to fly for myself. At others, I must watch from the ground to see how the craft performs. Your help in this will be invaluable to me." He shrugged. "But, if you are unwilling, or prove not to have the . . . well, we shall see. You will at least consider it?"

Katharine did not know whether to be terrified, excited, or offended. Her intent had been solely to assist Orville. Going aloft herself had never crossed her mind. She hedged. "May I, then, lay down on the infernal machine and see whether it suits me?"

For some reason, Orville looked startled. "If you wish it."

"I shall not damage it?"

"I rather think not."

Katharine knelt before the glider and leaned forward to lie prone. She squirmed into place between the wires, the wooden prongs of the steering cradle wrapping her hips. It felt like an oddly intimate act.

Orville appeared again before her, having walked around the right wing to the front of the machine. "Well, now. You are much shorter than Wilbur or myself, and somewhat lighter, I'll wager. How much do you weigh?"

From her undignified position on the ground, Katharine gave him a look. He cleared his throat. "Just so. Anyhow, we shall add some ballast, and you will need to scooch forward a little further off the front of the wing than you are now."

She wriggled. "Like so?" She would be half hanging off the thing. It felt precarious in the extreme.

"Approximately. And I shall have to adjust the hip cradle forward." Orville shook his head. "Really, Sterchens, you should have been born taller. A ghastly error on your part."

On the verge of gracing that with a scathing response, Katharine held her tongue. It was, after all, the first time she had witnessed Orville's old jocularly since arriving at Kitty Hawk. She glanced up with a smile, only to find his face turning serious again. "And how does it feel, to be lying there?"

All at once, her face felt hot. Of course, she lay in the very place, on the same glider, where Wilbur had met his death.

And somehow that had not occurred to her until now.

It was, perhaps, the oddest realization in what had been a very long day. She wanted to leap to her feet. She did not.

"I believe I may get used to it," she said, and that was that.

"Very well." He peered out of the hangar at the sky. "But alas, we are losing the light, and can do little more tonight. We should batten everything down here, prepare for the night, and be up tomorrow with the dawn."

Katharine looked at the wings of the glider extending out beside her, and the elevator in front. Suddenly, she imagined it without the solid earth beneath her—with nothing at all but air for twenty, forty, or even sixty feet between her and the harsh

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sand dunes of Kill Devil Hills below. A wave of vertigo struck, driving home the magnitude of what Orville was asking of her. “Bloody hell,” she muttered.

“What?” Luckily, Orville was now busy pulling in the spare fabric and tools, and putting the cover on the sewing machine.

“Nothing at all,” said Katharine.

Fifteen feet above her head the massive glider strained as if impatient to be free. The solid and imperturbable Dan Tate anchored the other end, looking anywhere but at Katharine. He had greeted her politely enough, but it was clear he was as flummoxed as his brother Bill by her presence at Kill Devil Hills. Whether he also thought her guilty of impropriety or was merely shy, she had no idea.

They had spent the last three days out here on the sand dune Orville called the Little Hill. Katharine had stared upward for so many hours that she had a permanent crick in her neck. In principle the menfolk were preventing the glider from soaring off over the Atlantic, and Katharine’s only responsibility was to manipulate the cords that managed the wing-warping and the elevator angle, aligning the glider into the wind for best advantage. In reality, even keeping hold of the control cords required the death-grip of both hands and the application of most of her weight. Her gloves had been shredded long ago and her hands were freezing, her left palm still red and scarred from the last time the rope had been ripped away from it.

But for all of that, adjusting the wing itself was not so hard. It required steadiness, and an odd combination of brute force and delicacy. On the first day she had regularly twisted the wings to such an extent that the glider dragged the men downhill through the sand, skidding and swearing, or skewed the elevator so dramatically that the bi-wing plunged sandward, requiring them to dance clear with some fleetness of foot. But by today it had become merely a question of reacting quickly enough when the fickle winds changed direction, which was often, or suddenly gusted, which happened even more frequently. By now, even Katharine had to admit that she largely had the way of it.

“Bring it down,” Orville called, and she felt a sense of relief. She tugged ropes, juggling the wing’s angle of attack in the air until she coaxed the skids down onto the slope, and the three of them leaped forward to pin the glider to the ground before it could take flight again.

Orville was already coiling the ropes and reaching into the glider to disconnect them. “Well, Katie, all aboard.”

She nodded. “You’re going up?”

“Not I,” he said. “I trust you will not get an attack of the vapors if I judge you and Dan unequal to the task of raising and throwing the glider with *my* mighty bulk aboard it.”

At the other end of the wing Dan Tate, mute, pulled his cap off and wiped the sweat from his forehead. The sky was mostly blue, and between the clouds the sun was unseasonably warm. Even though October had just given way to November, last night had been only a two-blanket night.

Not waiting for her response, Orville unhooked the sandbag from the pilot’s position. Behind it she saw a second, much smaller bag still pinned in place. “Really?”

As a rule, three men launched the glider. The brother who was to pilot it helped lift it at the center, then leaped aboard at the last minute. Six inches shorter than Orville and encumbered by skirts, that would not be possible for Katharine. “Are you sure you two can raise it up with *my* bulk upon it?”

Orville grinned. “Let us try.”

If Katharine refused, the day would be over, and perhaps the whole adventure. And she could never ask for better flying conditions. But still . . .

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Dan Tate's mouth had dropped open. He was glancing back and forth between her and Orville, and then yearning north toward Kitty Hawk and east toward the Life-Saving Station as if entreating these distant locations for salvation. He was clearly unhappy with this development. Perhaps Orville had never warned him it was a possibility.

At this realization, Katharine set her jaw. She was not going to refuse. But perhaps she should not give herself—or anyone else—too much time to consider it. "Surely, let's," she said, and crouched to crawl onto the lower wing of the glider.

"Up then, Dan," said Orville. "Dan?"

There was a long pause, during which Katharine steadfastly did not look at the unfortunate Dan Tate but busied herself ensuring her hips were correctly situated and that she had a good grasp of the elevator rods. She tugged at them experimentally, and noted how the elevator moved in response.

After what seemed like several minutes, she felt herself move. The sand retreated from in front of her face as the men, grunting, hoisted the glider up to waist height. They were unlikely to get it any higher, she realized. Perhaps it would not be enough—

Abruptly, the ground fell away as the wind flowed across the wings and buoyed the glider aloft. Katharine almost cried out as she lurched into the sky, but instead bit her tongue. Warm blood filled her mouth. She swallowed and instinctively twitched her hips to the left. Nothing happened, so she shifted left more definitively, while tilting the elevator upward.

The glider leveled. Her right wingtip had been dipping toward the ground, but her push to the hip cradle had warped the surface to raise it again, the blade of the rudder behind her accommodating for the resulting yaw.

Katharine had corrected the attitude of the glider in the air, and she had done it purely on the instincts accumulated over the past days.

Well, that wasn't so bad.

A gust hit her, and the elevator flexed in front of her. Beyond it, the line of the horizon dropped. This time Katharine rode it out, making no effort to correct, and indeed the glider soon righted. A stronger gust or a more sustained blow would have required her to adjust the camber of the wing once more, as she frequently had from the ground with the control cable. As it was, the glider was fine.

Katharine swallowed blood again, and realized she had not taken a breath since leaving the ground. She inhaled, but the rush of the wind in her face made it feel as if she had drawn nothing into her lungs. She opened her mouth, careful not to drip blood onto the sand twenty feet beneath her—twenty feet? Oh good Lord, it might be thirty—and breathed more deeply.

"You are soaring!" came Orville's voice from below. "Or would be, if we let you go."

"Not just yet," she said. "Now, hush."

She glanced left and right, accustoming herself to how the wings flexed, risked a look back beyond her feet at the rudder, and in doing so bumped her hip on the cradle. The craft slid sideways for what felt like an age but was probably mere seconds. She shrieked, adjusted too much, white-knuckled it for a few more moments, and leveled the horizon in front of the elevator again. *Jesus Christ*, she thought, and then even worse words flitted across her mind as another gust shoved at her.

"Kate, are you bleeding?" Orville asked.

"Tongue. It's nothing."

The glider was rocking back and forth. What was she doing wrong? Anything? Or did such motions just feel worse in the air than they had looked from the ground? Deliberately she adjusted her position again, and corrected for it. Did the reverse movement, and nothing happened. Shoved harder, and then the craft bucked and she countered again quickly. Beads of sweat dripped from her forehead into her eyes, but she had no free hand to brush them away.

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"You are not bad at this, Katie! Not bad at all!"

Katharine licked her lips and swallowed. "I should like to come down now."

"By all means."

Of course, landing this great ungainly craft of wood and muslin was her responsibility. And she must not ram it into the sands of the dune. She looked right and left again, and as she did so the wind changed its direction by thirty degrees in an instant. "Oooh. Whoa, damn . . . uh, great heavens."

She compensated, badly. Already she was getting tired, and if anything the glider seemed even larger now than it had before. Her hands trembled. "Here goes."

Of course, now that she *wanted* the glider to move toward the ground, she couldn't make it drop. It was the darnedest thing. She inclined the elevator, and a bit more. Steered more closely into the wind, pitched the elevator down again—

The nose dipped. Down she went. Too fast.

The next few moments were something like she imagined riding a bronco might be, as she tried to nurse the glider downward. And then the dune came up in earnest. Right beneath her prone body the skids slammed the sand, bounced, and impacted again. Sand sprayed into her mouth and eyes, and she jerked at the controls and landed for real, and Dan and Orville threw their weight onto the lower wing at either end, and she stayed down.

"Lord, have mercy," Katharine said.

Orville checked his pocket watch. "One minute and thirty-five seconds. Creditable, Sterchens, creditable indeed."

She dribbled blood into the sand. "You're joking." To her, it had felt like three quarters of an hour.

"Indeed not. Time flies, as they say. Now, let us study the wires on the right wing before your next attempt."

"Yes, let's," she said, clutching at any straw that would give her longer with her feet on the ground. "I did feel a lack of control to starboard. Very much so."

Dan Tate appeared above her, reaching down. She accepted his hand and let him draw her to her feet. She nodded her thanks, not eager to open her bloody mouth, and glimpsed something in his expression that she had not anticipated: a grudging respect.

Orville knelt on the lower surface, frowning. "Can you fetch me a wrench, with some haste? The wind is freshening."

"Of course."

Katharine hobbled over to the toolbox and dropped to her knees to select the right weapon for the battle to follow as they tightened the wires.

Then it struck her, in full force.

She had flown. For less than a hundred seconds, to be sure, but . . .

She, Katharine Wright of Dayton, Ohio, schoolteacher, daughter of a bishop, had left the bounds of the Earth and soared above it.

She had done a thing no woman had ever done before.

She had flown.

But the novelty soon wore off, for that afternoon she flew again some two dozen times. She lost count, and Orville took no notes, so fervent was his dedication to refining the glider. He himself did not take to the air, but scrutinized and frowned and cranked and tightened. And late in the day he began barking orders and pushing her to do more, exercise her motions more vigorously to rise and fall and bank, all the while connected to the ground by two stout lengths of rope. And Katharine did it all despite his curtness, because she knew that beneath the brusque instruction lay respect, as tangible as that of Dan Tate's touching of his forelock when he helped her up.

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Orville was treating her as he and Wilbur had treated each other: as colleagues. As partners in the adventure. She loved it.

And then, as the sun dipped toward the western horizon and the wind speed dropped from Strong Breeze to merely Moderate on the Beaufort Scale, they threw her off the hill with no ropes at all.

After the sweating thrill of her tethered ascents, her free flights were oddly anticlimactic. Her time in the air was much greater when she flew the glider tethered like a kite. Gliding, she came to earth after only a few hundred feet of forward motion, with little opportunity to practice the more complex aspects of the flying art.

Her longest free glide that evening was over in less than thirty seconds. But what did she care for that?

She had risen above the Earth and touched the sky. She was forever changed.

A deep dusk had fallen across the dunes by the time they dragged the glider back to the hangar. The last part was the worst, easing it alongside the bulk of the Flyer, which Katharine had still not seen. Somehow it seemed like tempting fate to even lift the corner of the tarpaulin that shrouded it.

"I should like to thank you, Mr. Tate, for your services today," she said. "It all surely could not have been done without you." She held out her hand, and saw Orville wince at the far end of the hangar.

Shaking a lady's hand was now acceptable among Dayton's finer set, if still not widespread. Here in North Carolina, Dan Tate froze in place, and then stepped back and touched his cap.

Apparently helping her to her feet was one thing, but grasping her hand in friendship was entirely another.

Orville was frowning as he walked over, but all he said was "Dinner? You too, Dan, before your long walk back to Kitty Hawk? You must be famished. I absolutely insist."

"And so," Orv said a little later, breaking a long silence. "We face a serious problem."

Katharine did not look over at Tate, but caught his quick glance at her out of the corner of her eye.

The doors were closed against the evening breeze and the mosquitoes, the shed lit by oil lamps. The three of them were sharing a sparse repast of hot biscuits, tinned tomatoes and plums, and coffee. They had run out of eggs two days prior, but somehow Katharine did not believe it was the eggs that Orville was referring to. "The propellers, still?"

Orville blinked. "The propellers, yes. Another day's work there alone. And besides that, the engine still has an unseemly vibration that I must attempt to cure before I connect up the chains. But I was speaking of manpower, not horsepower."

Katharine nodded. She knew what was coming, and Orville—as was his way—obviously intended to confront the issue head-on.

From her brothers' letters home over the past seasons at Kitty Hawk, Katharine knew that they relied heavily on local help. On their first arrival the Kitty Hawk postmaster, Bill Tate, had put them up, and until Wilbur's death he had still helped them on a daily basis. Obviously Bill's brother Dan was also frequently there. But, more than that, the men from the Life-Saving Station assisted them. Not for pay, but out of simple curiosity, for the Wrights were the oddest thing to happen in Kill Devil Hills for as long as any of them could remember. The keeper-in-charge of the station, Jesse Ward, rarely ventured out, but the others in his crew took it in turns to come over. Katharine knew their names by heart from Orville's letters: John Daniels, Will Dough, Adam Etheridge, Bob Westcott, Tom Beacham, Benny O'Neal. Ward only required that three men remain with him on duty, as they kept constant watch on the

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seas during daylight hours. Whenever Wilbur and Orville hung out a flag, any three men might come over, and Bill and Dan Tate as well.

However, since Bill had reported Katharine's arrival none of the surfmen had been seen, nor had Bill himself returned. Orville had hung out the flag the last two mornings to solicit help with the glider, but only Dan Tate had responded.

The glider weighed just over a hundred pounds, and Katharine around the same. But the flying machine weighed a lot more. Without help, not even the combination of Orville, Katharine, and Dan would be able to shift it.

"The other men no longer come here," Orville said. "Why do you suppose that is, Dan?"

Dan looked unspeakably embarrassed and said nothing.

"Perhaps their wives have forbidden them from coming over," said Orville. "Or maybe they themselves doubt the propriety of an unmarried lady living rough on the dunes?"

Katharine put down her plate a little too quickly. Plum juice slopped onto the floorboards. "That's preposterous."

Anguished, Dan turned to Orville. "Aye, sir, you've the right of it. The men won't come. The womenfolk have their jaws set against it."

"But without the men, we can hardly lug the machine out on our own." Orville considered. "How about if I were to tell them—"

Katharine stood, incensed. She raised her hand, palm up, and chopped it down like a blade. "Me. I shall mend this."

Dan eyed her nervously, but addressed his remarks to Orville, as he almost always did. "Nay, sir, that would only stir up the hornets worse than ever. I beg of you . . ."

Orville shook his head. "Dan is right. You cannot admonish the surfmen, Kate. This is not Dayton."

"Obviously not," she said. "What, do you think me simple? I'm going to talk to their wives."

They both stared at her.

Katharine's heart was beating quickly, and she wished she'd had more time to think this through. Nonetheless, she set her own jaw. She glowered down at the unfortunate Dan, who for all his bulk was now wringing his cap with such passion that he might soon rend it in twain. "After having solved the problems of lift, yaw, power, and all the rest of it, my brother shall not be defeated by the fishwives' sense of propriety."

"Yes, ma'am," he said.

"Leave them to me."

Orville looked worried. "Do not be hasty, Little Sister. These are cautious communities, old and long established."

"It is decided," Katharine said, and sat.

Dan sank his head into his hands.

"And, Mr. Tate? Do not, on any account, warn them that I am coming."

"Oh, no fear of that, ma'am," he said indistinctly. "I wouldn't dare."

Katharine plodded wearily home from across the sands. For the first two miles from Kitty Hawk she found herself staring at her feet. As the huts came in sight in the distance, she forced herself to raise her gaze and look around her.

Despite the rigors of life there, Katharine had to admit that the Kill Devil Hills possessed a stark majesty after all. The dunes themselves, with not a single tree or bush to mar them; the great eternal sky above them, arching down to the flat horizons; the puffy clouds scudding busily, driven by the perennial wind . . . it had a grandeur, even if that grandeur was reminiscent of the Norse Hel. And it was by no means devoid of life. Its birds taunted the Wrights with their mastery of that great



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sky and the turbulent seas: gulls and waders, gannets and eagles, hawks and turkey vultures, even the occasional mockingbird.

And some days, the sight of the sunrise over the sea might have been sufficient to move Katharine to tears, had her eyes not been streaming anyway due to the strength of the winds.

As she walked back now from Kitty Hawk, the breeze was unusually light, and would have been insufficient for effective gliding, but nonetheless her eyes kept leaking anyway, in sadness and frustration.

She was still a hundred feet from the huts when Orville stepped out from the workshop carrying an oilcan. His face fell when he saw the expression on hers. He nodded in sympathy, raised a hand, and proceeded under the awning into the hangar.

Katharine walked into the workshop and stowed her bag. She took off her traveling cloak, put the kettle on, and subsided into a chair, staring into space.

"It did not go well?"

Orville stood in the doorway, wiping his hands with a rag.

For a moment, she found herself unable to speak.

"No matter. I'm sure you did your best, but these sea-hardened village women are tough nuts to crack. I will take a boat to Manteo tomorrow and see if I can rent some laborers by the hour, although that will add up, and truly it will not be the same as . . . Katharine, what?"

Alarmed, Orv strode over. Katharine stood and put her arms around him, burying her face in his shirt.

He patted her awkwardly on the back. "Were they so horrid to you, Sterchens?"

"They were sweetness itself. But, Orville . . . there was a telegram awaiting me in the village."

"Yes?" He put his hands on her shoulders.

"Brother has been laid to rest in Woodland Cemetery, in Dayton."

"Next to Mother, I suppose."

"Apparently quite a crowd followed the hearse. We were missed."

"I'm sure."

At his formidable calm, Katharine broke away from him. "Orville, they buried Wilbur without us. We were not there for him. Not beside him to pay our respects."

It seemed monstrous to have missed it. What had she done? Why had she not turned around and hurried back to Dayton just as soon as she had heard that Wilbur's body was in transit? Tears filled her eyes again. The townsfolk would talk about it forever, and Wilbur would hate her for eternity.

"They could hardly have delayed. And I could not have been there anyway. I could not." Orville shuddered. "Stand by Brother's grave, with my hat in my hand? Stare down at his coffin being lowered into the earth with his poor, wrecked body imprisoned within? No. No. Better to be here, doing the work that meant so much to him."

Katharine almost slapped him. "We were not with him when he needed us!"

Orville stared down at her, perplexed. "Katharine, death is the end. Whatever Father may fondly believe, whatever they tell you in church on Sunday, Wilbur is not flying above us in Heaven. He is beyond caring whether we are in Ohio or the Carolinas or anywhere." He turned and surveyed the workbench. "And that is why my work is not over, not until I fulfill the dream that we had together, Wilbur and I, and have fed and nurtured all these years."

"Beast," she said.

He saddened. "Am I?"

Katharine took an enormous breath, and let it out slowly. It was done. Wilbur was buried. And she was here with Orville, who was still alive and needed her help as he never had before.

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She wiped her eyes. “Yes, you are a terrible beast, and I cannot believe that I even acknowledge your presence. However, you will not need to scavenge for muscle in Manteo, wherever that may be.”

Orville goggled at her in a way that might have been amusing on any other day. “I will not?”

“When next you hang out your flag, the men of the Station will make all haste to assist you.”

“Really? What did you do?”

Katharine met his gaze. “I talked to their wives. Of women’s suffrage.”

Orville’s eyes grew alarmed. “You did? Kate, the women in these parts are of a very conservative bent, and—”

Despite herself, Katharine laughed. “So you yourself have not broached the topic with them, Brother?”

“I have barely spoken to any of them.”

“Then I shall tell you. They were positively spellbound by my tales of Oberlin, and of marching for the vote. And when I told them how you used to print suffrage pamphlets on your printing press while still a schoolboy, they even warmed to *you* quite considerably. But all that aside, I made friends with them sufficient that their men-folk will again attend to us without sanction.”

Orville was gazing upon her as if she had herself sprouted wings and taken flight. “Truly, Little Sister, you are a marvel.”

And perhaps his sudden admiration did lift Katharine’s spirits a tiny bit. She tilted her head in feigned modesty. “If you say so. And also: I have brought eggs.”

At that, Orville’s eyes moved beyond adoration and into rapture, and he actually clapped his hands.

Katharine had also acquired bacon, but she would let that be a further joyous surprise later on, when it landed in the hot pan and filled the hut with its aroma.

“And as for you?” she inquired. “How have you frittered away your day in my absence?”

As they walked into the hangar, she caught the twin whiffs of gasoline and varnish.

“Here it is, in all its glory.” Orville grinned. “Our whopper flying machine.”

“Good Lord,” she said.

Orville was not wrong. Unveiled, pulled away from the wall with its elevator and rudder assemblies now installed, the Flyer was *big*.

The brothers had never assembled the entire Flyer in Dayton. There had not been sufficient space. She shook her head, and assessed. “The wingspan. Forty feet?”

“And four inches. Total wing area is a little over five hundred feet.”

Eight feet broader than the glider, and with almost half again the wing area. It stood at least a foot taller off the ground, and from the front tip of the double-decker elevator to the rear of the twin-bladed rudder it was surely six feet longer. And beautifully constructed, as was everything Wilbur and Orville had ever made: sleek lines, perfect seams. Katharine was sure each rib and spar was exactly the right size, and every diagonal wire that made up the truss between the two wings was at precisely the correct tension, or would be soon enough.

New to her, of course, was the engine that was bolted to the lower wing and the two propellers of laminated and varnished spruce, each eight feet across, their shafts connected to the engine with a chain-and-sprocket arrangement. These propellers pointed backward, to push the craft through the air.

Orville was studying her face. “So, Sterchens, tell me what you make of it.”

He was not fishing for compliments. The Flyer had a strength and elegance

## Asimov's

Katharine had not been expecting, but that was not what Orville wanted to hear. He sought her honest appraisal, as a partner and a fellow engineer.

Or, at least, what she might have said if she had possessed any engineering background whatsoever.

Katharine gave it her best shot. "What is the curvature of the airfoil?"

"One in twenty. A little less than the glider."

"You have a double layer of fabric now? To improve the air flow?"

"Just so."

"Despite the excess weight?"

He shrugged. Katharine bent and squinted. "Perhaps it is my imagination, but it seems that the wings are not of equal length."

Orville smiled, gratified. "Indeed. The right wing is four inches longer than the left, to compensate for the weight of the engine to the pilot's right."

Almost confounded, she struggled to remember fragments of the brothers' conversations over dinner at 7 Hawthorn Street. "Naturally the propellers will spin in opposite directions, to reduce the, uh, torque."

"To cancel the gyroscopic effect, exactly."

"And you say you have conquered the vibration issue? Just today?"

"Tidily."

How would Wilbur have reacted? Katharine chose to look skeptical. "I suppose we shall see."

Orville nodded, not in the least offended.

She frowned. "Just how heavy *is* that engine?"

"Some one hundred and seventy pounds. Horizontal 4-cylinder, water-cooled, twelve horsepower—"

"And so, the whole machine?"

"A little over six hundred pounds, I believe."

"Good grief." Katharine gaped. "The glider is light enough to be tossed into the air. But even six men would struggle to raise this off the ground, and surely these propellers cannot provide enough force to push this behemoth out of the sand and into the skies . . . ?"

"Not from the sand. There will be a rail, sixty feet long, constructed of two-by-fours and sheathed in metal. A small wheeled cart will fit on the underside of the flying machine, see, just here? And thus will friction be reduced."

Katharine straightened. "Orville, you *are* a genius."

He grimaced. "Half a genius. Brother was the other half. But we shall live off his ideas a little longer. Long enough to get into the air, with any luck."

Now, excitement gripped her. Perhaps, despite all, this was really going to happen. "May I?" She gestured at the pilot's position, feeling presumptuous. "Just to look."

"By all means."

The transmission chains stretched diagonally from the engine to the propeller shafts. Coming from the rear, she had to duck under the chain that stretched from the engine to the left propeller. Somewhat gingerly, Katharine crawled between the wires to lie on her stomach.

The lower wing of the Flyer was deeper than that of the glider, and there was no gap in it; she lay directly on the wing's surface. It was perhaps an illusion, but this felt more secure. And the hip cradle was padded, more comfortable than the version on the glider. The engine was awfully close on her right, though, which seemed terribly unsafe, and having once heard this very engine clattering away on her brothers' mechanic Charlie Taylor's bench in the bicycle shop in Dayton, Katharine had a keen sense of how loud it would be. Piloting the Flyer would not be the silent joy that the glider was. She would not be able to hear the breeze whistling through the spars and wires. . . .

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She? She would not be flying this.

Nonetheless, she placed her hand experimentally on the lever that adjusted the elevator, gripping the crossbar with her right. She would miss it, when she returned to Dayton and her life teaching Latin in the mornings and managing her father's household in the afternoons and evenings. She would miss the freedom of the air.

Orville stood quietly, not interrupting her reverie. Perhaps he understood.

Katharine cleared her throat and looked at the other new devices fastened to the strut in front of her and to the right. An anemometer and chronometer. "You will require four hands to manage all this."

Orville pointed to a small lever on the lower wing she had not noticed. "Here. One push turns off engine, chronometer, and anemometer all at once upon landing, preserving an accurate record of distance, time, and thus airspeed."

Reluctantly, Katharine pushed herself up and back off the wing. "It's wonderful, Orv. With this, you will conquer the air."

"Eventually. But let us not get ahead of ourselves. The propeller shafts may yet be an issue, and I have a lot of fine tuning yet to do."

To Katharine the Flyer already looked ready to spring into the skies. "So, not tomorrow?"

"Well, *maybe* tomorrow."

Two days later it dawned bright and breezy, and all was prepared. Orville had declared himself satisfied with the engine, the propellers, the wire tensions, the launching rail, and even the wind strength and direction. It was time to make the attempt.

They hung out the flag, and within the hour John Daniels, Adam Etheridge, and Will Dough arrived from the Life-Saving Station. Not long after Katharine greeted the surfmen and plied them with coffee, Bill and Dan Tate trudged in from Kitty Hawk.

Even with all this brawn at their disposal it took some time to drag the Flyer on its skids to the launching track. Never in Katharine's life had a few hundred feet seemed so far. But she put her back into the effort as stoutly as the men and, despite her skirts, fell down into the sand no more often than they did.

Despite the seriousness of their mission, laughter rang back and forth between them all. Orville smiled too, but looked a little wry at the high spirits between his sister and the men of Kitty Hawk. Clearly under Wilbur's direction the atmosphere amongst the troops had been more workmanlike.

The mood turned serious once they got to the launching rail. There were a hundred details to be attended to. Orville sent Daniels back to the workshop to fetch the Korona camera, and Katharine helped him set it up on its tripod, insert the glass photographic plate, and aim the whole toward the end of the rail. In the meantime, Orville and Will Dough topped up the water in the engine reservoir and the gasoline in the quart-and-a-half tank mounted beneath the upper wing. And then, of course, with a perfect wind of fifteen miles per hour blowing steadily from the south, Orville had to go over the entire Flyer from wingtip to wingtip, checking each rivet and bolt and wire, every inch of muslin and visible scrap of wood.

As he made his inspection, the tension grew. John Daniels took off his flat cap and twisted it in his hands, eyeing the clouds. Other men stepped back and forth from one foot to the other. Will Dough chewed his nails.

Katharine resisted the urge to nag her brother to hurry. The weather at Kill Devil Hills could change dramatically without warning; it had happened many a time since her arrival. She watched the waves pounding the beach to the east. Was the wind picking up?

"Little Sister?" The Flyer sat at the end of its rail, held level by Dan Tate on the

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left wing and Will Dough on the right. Adam Etheridge and Bill Tate stood ready behind the propellers. And Orville was beckoning to her.

She walked slowly over to him. For some odd reason, she felt that she should have prepared something to say. The occasion seemed to warrant it. But she was tongue-tied and almost impossibly nervous, so she said the only thing possible under the circumstances.

"Good luck, Brother."

She held out her hand. Orville looked down at it, then reached forward and scooped her up into a hug, a thing he had not done of his own volition since she'd graduated from Oberlin in 1898. "Thank *you*, Kate. For coming. For helping. For everything."

Katharine recovered, and squeezed him back. "It was nothing, Orville, my love. Any sister would have done the same."

"I think not," he said, indistinctly.

"Orv, you will quite embarrass the men."

"Of course, of course." He released her, turning away. "And so, is it time to fly?"

She regarded him. Today he was wearing a white shirt with a starched collar, and a black tie, and a Scottish plaid cap. "You look every inch the *aviateur*."

"Looks are not everything."

"Sometimes they are," she said. "Go to it, Orville. Fly the Flyer."

He bowed and stepped away, and with a sudden bleak twist to her stomach, Katharine wondered whether he would still be alive in five minutes time.

When Etheridge and Bill Tate spun the propellers and the engine fired up, everyone's hands but Orville's darted up to their ears to fend off the desperate racket. Was this wondrous engine really supposed to sound so awful?

Evidently it was. Despite the engine's shriek and the clouds of smoke, Orville looked content. Katharine walked to the right wingtip and put her hand up to the spar. It was smooth and silken, the vibration of the engine merely a light quiver under her fingers.

Orville crawled into position, lying flat on the wing with his hips in the cradle and his hand on the elevator lever. He tinkered briefly with the chronometer, then held his hand up. Apparently he was waiting for the engine, because in a few more seconds the blast of sound abated a little. Or perhaps Katharine was merely growing deaf.

Orville waved, and released the wire that anchored the Flyer.

It began to move forward. Katharine walked with it, ready to throw her weight onto the wing or shove it upward, but it seemed stable enough. She could only hope that would last.

The Flyer moved faster. Katharine fell into an ungainly run, hampered by her skirts, and Will Dough darted around her, sprinting like the wind to keep up with it.

Still running, already panting, Katharine saw the exact moment when the Flyer left the rail, saw that tenuous but vital gap appear and grow.

The Flyer drifted upward. It rose, and the left wing dipped, and Orville adjusted. Down it came again, sinking toward the sand. Even now, Orville was only thirty feet from Katharine, and she saw the confident flick of his left hand as he corrected again and the nose of the Flyer came up.

It was not a graceful flight. The whopper flying machine was heavy, not a kite floating on the wind but a slab of wood and cloth and metal shoving its way through the air with the propellers that even now blew at Katharine's hair worse than the wind did. The Flyer was twenty feet up, and then down to six feet, and then up again as if it were bouncing, although it never touched the ground. Now its right wingtip began to drop, and Orville seemed to have trouble raising it again. Yet on he flew.

The skids hit the ground after perhaps a hundred and fifty feet, and at the same

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time the tip of the right wing dug in, sending a spray of sand high into the air. Orville flung his right hand forward and the engine mercifully died as the Flyer slid, skating to a standstill.

It was only in the sudden silence that Katharine realized she had been shouting at the top of her voice: words of victory, words of encouragement, and even a few choice curse words, in a verbal *mélange* that in no way resembled the diction of a sane person. She clamped her jaw closed and wiped the sweat from her face.

“Great Holy God,” she said to herself. “Brother has flown.”

Orville had done it. He had achieved flight, powered and controlled, from a standing start on the ground, and had come safely back to earth. Today, Thursday November 5th, 1903, man had conquered the air.

As Katharine ran to him, he was already crawling out of the Flyer and getting to his feet. He turned, but said nothing to her as she threw her arms around him once more. Instead he called over her shoulder to John Daniels at the camera. “Did you expose the plate? Did you? Tell me that you did!”

No celebration for Orville, but another hour of sustained work. “Too erratic,” was his terse assessment of his historic achievement, and apparently some tinkering with the elevator balance and the warping wires would fix that.

His second flight occurred shortly after noon. By then the wind was stronger and he went off straight as a line for four hundred feet.

“Better,” he said, eyes shining. “It still wants for a little stability, but it is manageable, no longer a wild horse. And now, you?”

“I what?” Then Katharine caught his expression and backed away. “I, nothing. The Flyer is yours, Orville.”

“Nonsense. You know that you can. What did you see me do that you have not done yourself five dozen times?”

“But if I break it?”

“Then I mend it. But, of course . . .” Orville’s eyes twinkled for the first time that day. “If you lack the desire, or the courage, then I release you from any obligation.”

The engine clattered. Katharine released the wire, and the Flyer began to move.

Suddenly unnerved, she glanced to the right, where Orville was running by the wingtip. Already he seemed to be running faster than she even knew he could.

And then she was off the ground.

It *was* heavy. The ponderousness of the Flyer was clear, compared to the glider. But it responded in exactly the same way. When the nose dipped, Katharine resisted the urge to shove mightily and brought it back up with an easy, gradual movement of the elevator.

All she wanted was to fly in a straight line like Orville, just as straight and level as she possibly could, and no more than twenty feet off the ground. And that was what she did, frowning so intently that her face hurt.

Landing was the worst part. Her fear was that she would dig the Flyer’s nose into the sand and send it into a somersault. Instead it plopped down solidly and came to a quick halt, throwing sand into her eyes and mouth.

She was down. Katharine did not move immediately but stayed where she was, peering at the dirt a few inches below her face, stunned.

Only then did she think to flip the lever to turn off the motor, whose din she had somehow grown accustomed to. But Orville had been keeping a separate record with his pocket watch. Katharine had flown 824 feet in one minute and four seconds, under full control.

\* \* \*

## Asimov's

Some lunch, more adjustments, and Orville went again, flying twelve hundred feet in a minute and a half, and reaching an altitude of thirty feet. The happiness in her brother's eyes made Katharine want to hug him again, but she did not, merely put her back into hauling the Flyer back to the rail with the surfmen. Once there she fetched the can of gasoline and helped Orville top up the tank.

He looked at his watch, studied the sky and the wave-tops offshore, measured the wind with the anemometer, frowned at the Flyer, then nodded. "You should go again, Sterchens. Truly, you should."

"Oh, very well," Katharine said. "If you insist."

She left the ground again, rose steadily to thirty feet, leveled off. Aloft. Flying.

This time Katharine felt no trepidation, only a confident calm. The whopper flying machine already felt like a part of her, responding smoothly to her movements as if she had spread out her arms like giant wings and taken to the air all by herself.

The wind had shifted to the west, and was stronger now and gusting. Her flight was not as straight as before, but the combination of hip movement and elevator control was keeping her going. From the ground it must have looked like she was wallowing, oscillating from thirty feet to forty and back down again, but under the circumstances that was quite good enough.

She did wish the engine were quieter. She would have liked to hear the wind soughing through the wires of the flying machine as it had in the glider. The gannets and gulls had a much more peaceful time of it in the air.

Perhaps that could be the next challenge for Orville. A silent combustion engine—

And then, from behind her, even over the din of the engine, she heard a terrible cracking sound and at the same time felt a huge shove. The Flyer bucked sharply left and up, almost bouncing her out of the hip cradle. She had a brief vision of being hurled off the machine into empty space. . . . She rocked and squirmed herself back into place, then realized the elevators were tilted up too far. She was soaring higher.

Yet before she could react a new threat came: a deep vibration, as if the Flyer might shake itself into pieces. The flying machine yawed even more heavily to the left as if pulled by a giant's hand, completely beyond Katharine's control. Surely no gust of wind short of a sudden hurricane could achieve such an effect on a craft of six hundred pounds or more.

Thought came slowly, as if she had sand in her mental gears. She was clutching the crossbar in front of her with both hands, still trying not to be thrown off. Slowly, agonizingly, she released her hold with her left hand and reached for the elevator lever. At the same time, she shoved at the hip cradle as hard as she could to try to level the Flyer against the bizarre force that was angling it up and to the left.

Steeling herself against the vibration, she looked at the laboring engine, and then behind her, just in time to see part of the left propeller break free and spin up and away from her. "Bloody hell . . ."

If anything, the vibration and the ungodly shoving redoubled. Fortunately, logical thought returned in time to save her: she loosened her white-knuckled grip on the crossbar with her right hand, and jerked at the lever to shut off the engine.

A merciful silence fell. The vibration stopped and the dreadful shoving gradually ceased, but now the nose of the Flyer dipped, the beach and the ocean beyond rearing up to fill her field of view.

"Damn it!"

She hauled mightily, and once again the Flyer pitched up toward the clouds. Too much, she realized. In her panic she was overreacting to everything. Was she to die, like Wilbur?

Ah, Wilbur. Calm returned to her, along with a sure knowledge. If Wilbur existed

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anywhere any more it was up here in the air beside her. Whenever Katharine flew, a part of Wilbur would always be with her.

And the Flyer was not their enemy.

Katharine stopped fighting. She relaxed, once again feeling her imaginary arms extending the length of the Flyer's wingspan, feeling herself again become one with the machine.

She would not pitch down into a fatal plunge to the sands below. She would keep the nose up. But not at such a steep climb that the Flyer stalled.

Behind her the propellers were still revolving a little, idling in the air. Well, the right one was. The left had only a part of a single blade remaining. The rest had sheared off. That had been the almost-fatal damage, the failure that might have killed her as she struggled to deal with too much, all at once.

But now she was a glider again, riding the wind.

Katharine looked down, and felt a surge of vertigo. She was *high*, well over a hundred feet up. In averting a crash, she had risen far higher than she or Orv had ever been before, had ever intended.

And she had been pushed hard left, meaning east. In just moments she would cross the waterline and head out over the ocean.

"Huh," she said. "Well, Brother, *this* will not do."

The air around her seemed to agree.

Katharine shifted her weight, tugging the Flyer into a rightward bank. The coastline hereabouts described a straight line from north-northwest to south-southeast, and if she could hold a course steadily across the line of that brisk west wind, she might gradually regain the shore to the south.

If she could not, if she landed in the icy seas off North Carolina at this time of year, she would survive only minutes. The shock would immobilize her limbs, and her waterlogged dress would drag her down.

Many times in her waking nightmares Katharine had imagined smashing into the ground and breaking every bone in her body. Never had she imagined drowning.

"Could use some help here, Brother."

None came.

She tried to bank harder, to pull the nose around, but had to ease up. The craft was on the edge of a sideslip, one that would pull her down into the sea even more quickly. Now, perversely, the trick was to maintain as much altitude as possible while she attempted to regain the land. Could she coax the craft higher?

She tried, but so far above the waves she couldn't tell if she had succeeded. She looked again for the shoreline, and cursed.

It was not coming any nearer. The wind was too strong. With no engine she would not be able to regain the beach, merely parallel it. She could not defy physics.

Now what?

Poor Orv. To lose Wilbur, and now see his Sterchens heading hopelessly out to sea, all in the same fortnight . . . Forlornly she glanced back toward Kitty Hawk, feeling very alone.

And saw a vessel putting out to sea. From the Life-Saving Station, behind her to the north. "Well, of course," she said. Even when some of the men came to help the Wrights, the remainder kept up their vigilance on the seas. And they trained weekly in the speedy deployment of their craft.

But could they catch up to her?

No.

She had a glide ratio of, what, twenty to one? Even if she was two hundred feet up she would have only four thousand feet of horizontal travel left before she ditched in the water. They could never overhaul her in time.

There was only one answer.



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"Well, Brother, this will be exciting," Katharine said. She banked the Flyer to the left, and abandoned the coast.

Heading north of east. Further out to sea.

Now she was flying with the wind instead of against or across it, everything was a lot quieter. Deceptively peaceful, in fact.

The surfboat was now to her left, and it appeared that its captain had seen her change direction and divined her intent. As best she could tell, if the crew rowed with all dispatch, their paths would intersect perhaps half a mile out from the shore. But she was losing height at quite a rate.

On she went. The beach dwindled behind her. It was rather unnerving.

Inexorably, the Flyer drifted down toward the cold, gray sea. Katharine's heart pounded, and her breath became short. "Damn it, damn it, damn it . . ."

All too soon, the skids of the Flyer were skimming the wave-tops. Katharine pulled back, tilting the elevator up as much as she dared.

She had thought to raise the Flyer's nose again just before she hit the water and attempt to splash down gracefully, but such control was beyond her. The waves grabbed at the skids, the elevator frame, the left wing.

All at once, the Flyer flipped. Icy seawater slammed into Katharine's face. The shock of impact peeled her away from the wing where she had lain, effortlessly breaking her grip on the bar.

Her back struck the underside of the Flyer's upper wing. Sea and sky blurred around her. Once again, Katharine flew.

The shock of hitting the water knocked the breath from her body and drove her insensible for several seconds. Then she was flailing, freezing, her face still underwater. She broke surface with a half-scream, swallowed water, thrashed again.

Something hit her on the head. She punched at it, grabbed it. It was a ten-foot section of wing, torn free from the Flyer. She looped an arm around it clumsily, already incapable of feeling her fingers. Tried to breathe, but shock still prevented it.

*Wilbur . . .*

All of a sudden, the surfboat was upon her. Oars plunged into the sea all around her, banging the wing section she clutched. The prow of the vessel swung up and down right in front of her face. For a moment it appeared that the surfboat itself might plow her underwater.

Hands reached down and took hold of her. Katharine felt herself lifted, dragged ignominiously aboard; felt her wet and freezing clothing being cut away, men tearing away her skirts down to her bloomers and then smothering her in dry, warm blankets. And she was breathing again, sucking in great whoops of air.

Katharine would survive after all.

And much more important, brother Orville would not have to live with her death.

The boat rocked dizzily in the surf. She closed her eyes, tried not to retch, and pulled the blankets up over her head in an attempt to still her terrible shivering.

She felt the boat turning, heard the shouts as its captain set the course for shore.

Despite the exhortations of the men, Katharine soon sat up, clutching the blankets around herself. Behind, bobbing forlornly on the ocean waves, were the shattered pieces of the Wright Flyer, that brave machine that had carried her aloft and obeyed her commands. Most of the time. "So long, old girl," she said through chattering teeth.

And ahead of her on the beach, his hands up to his head as if he were tearing out what remained of his hair, was Orville Wright, waiting to reclaim his Sterchens from the air and the water that had nearly been the death of her.

Katharine hoped he would not be *very* angry with her.

\* \* \*

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Orville was not. He treated the loss of the Flyer as nothing, when put next to the continued existence of his Little Sister.

She supposed that was quite gratifying. After all, he could always make another Flyer. And, in fact, as they sat on top of the Big Hill that evening watching the sun set over Roanoke and the Albemarle Sound, she was content to listen to him prattle about the many and varied improvements he planned for the Flyer II.

Meanwhile, golden light flooded the dunes, and the wind had faded to a gentle breeze of eight miles per hour, now from the south. At Kitty Hawk the winds were nothing if not capricious.

Katharine had urged Orville to send a telegram to Dayton to inform Father and the rest of the family of their success in achieving powered flight. After all, they desperately needed some good news at home. But Orville had refused to leave her alone for the time it would take to ride his bicycle to Kitty Hawk and back. Apparently, tomorrow would suffice. She thought that was quite sweet, too.

“And so, you have made the future. You and Wilbur.”

He cocked an eye at her. “I rather think we have. Wilbur the most, of course. But, without you . . .”

Katharine patted him on the hand. “I did nothing.”

“We did right by Wilbur. Didn’t we, Kate? Didn’t we?”

A lump came to Katharine’s throat. She looked at the sunset once more, and nodded. “Yes, Orville. I truly believe that we did.”

Orv nodded, and then his eyes gained that faraway look that meant he was thinking. “For future landings on water we should need much larger skids. Floats, really. For rivers, I mean. The sea is perhaps too challenging to contemplate.”

She shivered involuntarily. “And perhaps a canoe mounted beneath, to take the pilot ashore?”

“We’ll make an engineer of you yet.”

Katharine shook her head. “Stop thinking of wings and skids, just for a trice, and think of Dayton, which is the best place in the world. Let us go back there. And pay our respects at our brother’s grave.”

He nodded readily enough. “We will pack tonight. Leave tomorrow morning.”

“Morning?” she said, playfully.

He frowned, baffled. She leaned forward. “Orv, we still have the glider.”

Orville looked at her quizzically. “Well, yes. But . . .?”

“Yes,” said Katharine Wright. “And so tomorrow, before we leave together . . . let us fly again.”

*Orville and Katharine Wright did not return to Kitty Hawk the following year. Instead, they conducted experiments with a new Flyer in Huffman Prairie, an eighty-four-acre cow pasture eight miles northeast of Dayton. There, they learned how to fly complete circles and figure eights, at a height of several hundred feet. Their flights received massive press attention, in large part due to the controversial presence in the air of the charismatic and outgoing Katharine Wright.*

*The Wrights were courted by the War Department in the U.S., the British Army, and a syndicate of French businessmen, all interested in the potential military applications of the Wright Flyer. Orville, however, was swayed by Katharine’s argument that the air should belong to all mankind, and that the Wrights should be remembered for peaceful applications of flight.*

*In the coming years the Wrights performed flying exhibitions across the U.S. and Europe, and Katharine wowed royalty and elder statesmen across two continents. Her friendship with the great philanthropist, Andrew Carnegie, led to the establishment of the Carnegie-Wright Foundation, with Orville and Katharine as joint directors. The*

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*Foundation's lawyers successfully defended the Wrights' patents against alleged infringement by Glenn Curtiss and others, leaving Orville free to experiment with further innovations in flying technology.*

*Meanwhile, Katharine was hailed as a heroine by Susan B. Anthony and the Women's Suffrage Movement, and returned to her political activities. The energy she provided contributed to the passing of the Seventeenth Amendment in 1910, prohibiting any U.S. citizen from being denied the vote based on their gender.*

*The voting presence of women in the election of 1912 almost caused a major upset, with Theodore Roosevelt's new independent Progressive Party coming within a hair's-breadth of victory. The Bull Moose Party would have its day in the 1920s. In the meantime, when the Great War broke out in 1914, President Woodrow Wilson pursued a policy of neutrality. Due to the strength of the anti-war caucus in the new broadened electorate, Wilson was able to preserve this policy throughout his second term.*

*Military aviation played a decisive role in the Great War, but the United States never entered the conflict. ○*



## Small Certainties

The man who answers the phone in customer service puts me on hold again. He's the fourth one to swear his system shows nothing wrong with my on-the-fritz psychic connection, this high-speed line from me to the future that predicts morning traffic and each night's chance of rain. The technology improves all the time, says Rep #4, back on the line, probably thinking I'm one of those callers who blames a low-cost ESP hookup for failing to deliver the big answers, the advance notice of catastrophe its customers are hoping for. No, I say. All I want is to fix this tiny orange light that's blinked nonstop since yesterday. I want to know whether next week is the right time to get tomato plants and sound quotes for roof repair. I want prediction as advertised: ordinary clairvoyance and small certainties, a gentle smoothing of the way.

—Sara Polsky