

## Vesper Flights

I found a dead swift once, a husk of a bird under a bridge over the River Thames, where sunlight from the water cast bright scribbles on the arches above. I picked it up, held it in my palm, saw the dust in its feathers, its wings crossed like dull blades, its eyes tight closed, and realised that I didn't know what to do. This was a surprise. Encouraged by books, I'd always been the type of Gothic amateur naturalist who preserved interesting bits of the dead. I cleaned and polished fox skulls; disarticulated, dried and kept the wings of road-killed birds. But I knew, looking at the swift, that I could not do anything like that to it. The bird was suffused with a kind of seriousness very akin to holiness. I didn't want to leave it there, so I took it home, swaddled it in a towel and tucked it in the freezer. It was in early May the following year, as soon as I saw the first returning swifts flowing down from the clouds, that I knew what I had to do. I went to the freezer, took out the swift, and buried it in the garden one hand's-width deep in earth newly warmed by the sun.

Swifts are magical in the manner of all things that exist just a little beyond understanding. Once they were called 'devil birds', perhaps because those screaming flocks of black crosses around churches seemed pulled from darkness, not light. But to me they are creatures of the upper air, and of their nature unintelligible, which makes them more akin to angels. Unlike all other birds they never descend to the

ground. As a bird-obsessed child, I was frustrated that there was no way for me to know them better. They were so fast it was impossible to focus on their facial expressions or watch them preen through binoculars. They were only ever flickering silhouettes at twenty, thirty, forty miles an hour, a shoal of birds, a pouring sheaf of identical black grains against bright clouds. There was no way to tell one bird from another, nor to watch them do anything other than move from place to place, although sometimes, if the swifts were flying low over rooftops, I'd see one open its mouth, and that was truly uncanny, because the gape was huge, turning the bird into something uncomfortably like a miniature basking shark. Even so, watching them with the naked eye was rewarding in how it revealed the dynamism of what before was merely blankness. Swifts weigh about forty grams, and their surfing and tacking against the pressures of oncoming air make visible the movings of the atmosphere.

They still seem to me the closest things to aliens on Earth. I've seen them up close now, held a live grounded adult in my hands before letting it fall back into the sky. You know those deep-sea fish dragged by nets from fathoms of blackness, how obvious it is that they aren't supposed to exist where we are? The adult swift was like that in reverse. Its frame was tough and spare and its feathers bleached by the sun. Its eyes seemed unable to focus on me, as if it were an entity from an alternate universe whose senses couldn't quite map on to our phenomenal world. Time ran differently for this creature. If you record swifts' high-pitched, insistent screaming and slow it down to human speed you can hear what their voices sound like as they speak to one another: a wild, bubbling, rising and falling call, something like the song of northern loons.

Often, during stressful times when I was small – while changing schools, when bullied, or after my parents had

argued – I'd lie in bed before I fell asleep and count in my head all the different layers between me and the centre of the Earth: crust, upper mantle, lower mantle, outer core, inner core. Then I'd think upwards in expanding rings of thinning air: troposphere, stratosphere, mesosphere, thermosphere, exosphere. A few miles beneath me was molten rock, a few miles above limitless dust and vacancy, and there I'd lie with the warm blanket of the troposphere over me and a red cotton duvet cover too, and the smell of tonight's dinner lingering upstairs, and downstairs the sound of my mother busy at her typewriter.

This evening ritual wasn't a test of how much I could keep in my mind at once, or of how far I could send my imagination. It had something of the power of incantation, but it did not seem a compulsion, and it was not a prayer. No matter how tightly the day's bad things had gripped me, there was so much up there above me, so much below, so many places and states that were implacable, unreachable, entirely uninterested in human affairs. Listing them one by one built imaginative sanctuary between walls of unknowing knowns. It helped in other ways, too. Sleeping was like losing time, somehow like not being alive, and drifting into it at night there sometimes came a panic that I might not find my way back from wherever I had gone. My own private vespers felt a little like counting the steps up a flight of steep stairs. I needed to know where I was. It was a way of bringing me home.

Swifts nest in obscure places, in dark and cramped spaces: hollows beneath roof tiles, behind the intakes for ventilation shafts, in the towers of churches. To reach them they fly straight at the entrance holes and enter at full tilt. Their nests are made of things snatched from the air: strands of dried grass pulled aloft by thermals; moulted pigeon-breast feathers; flower petals, leaves, scraps of paper, even butterflies.

During the war, swifts in Denmark and Italy grabbed chaff, reflective scraps of tinfoil dropped from aircraft to confuse enemy radar, flashing and twirling as it fell. They mate on the wing. And while young martins and swallows return to their nests after their first flights, young swifts do not. As soon as they tip themselves free of the nest hole, they start flying, and they will not stop flying for two or three years, bathing in rain, feeding on airborne insects, winnowing fast and low to scoop fat mouthfuls of water from lakes and rivers. European swifts spend only a few months on their breeding grounds, another few months in winter over the forests and fields of the Congo, and the rest of the time they're moving, making a mockery of borders. To avoid heavy rain, which makes it impossible for them to feed, swifts with nests in English roofs will fly clockwise around low-pressure systems, travelling across Europe and back again. They love to assemble in the complicated, unstable air behind weather depressions to feast upon the abundance of insects there. They depart us quietly. In the second week of August the skies around my home are suddenly empty, after which I'll see the occasional single straggler and think, *That's it. That's the last one*, and hungrily watch it rise and glide through turbulent summer air.

On warm summer evenings swifts that aren't sitting on eggs or tending their chicks fly low and fast, screaming in speeding packs around rooftops and spires. Later, they gather higher in the sky, their calls now so attenuated by air and distance that to the ear they corrode into something that seems less than sound, to suspicions of dust and glass. And then, all at once, as if summoned by a call or a bell, they rise higher and higher until they disappear from view. These ascents are called vespers flights, or vesper flights, after the Latin *vesper* for evening. Vespers are evening devotional prayers, the last and most solemn of the day, and I have always thought 'vesper flights' the most beautiful phrase, an

ever-falling blue. For years I've tried to see them do it. But always the dark got too deep, or the birds skated too wide and far across the sky for me to follow.

For years we thought vesper flights were simply swifts flying higher up to sleep on the wind. Like other birds, they can close one eye and put half of their brain to sleep, with the other half awake and the other eye open for flight. But it's likely that swifts properly sleep up there too, drift into REM states where both eyes are closed and flying is automatic, at least for short periods. During the First World War, a French aviator on special night operations cut his engine at ten thousand feet and glided down in silent, close circles over enemy lines, a light wind against him, the full moon overhead. 'We suddenly found ourselves,' he wrote, 'among a strange flight of birds which seemed to be motionless, or at least showed no noticeable reaction. They were widely scattered and only a few yards below the aircraft, showing up against a white sea of cloud underneath.'

He had flown into a small party of swifts in deep sleep, miniature black stars illuminated by the reflected light of the moon. He managed to catch two – I know this is impossible, but I like to imagine that he or his navigator simply stretched out a hand and picked them gently from the air – and one swift was pulled dead from the engine after the flight returned to earth. The remote air, the coldness, the stillness, and the high birds over white cloud suspended in sleep. It's an image that drifts in and out of my dreams.

No longer do I conjure the stratifications of earth and air as I go to sleep. Instead, I play an audiobook on my phone, set it on my bedside table and let the whisper and catch of the narrator's voice turn to white noise as I drift away. Hearing the same words spoken by the same voices over and over again is a habit that began after my father died, when letting my attention wander as I dozed took me to places I didn't

want to go, towards matters of whys and wheres and hows and what-ifs. Listening to mystery novels was a perfect distraction, and to begin with I'd be caught up in their plots. But after a few weeks of repeats, what I learned to love most of all was the soft predictability of each oncoming line, the comfort of knowing the words about to be spoken. I started this night-time ritual over a decade ago, and I'm finding it hard to shake the habit.

In the summer of 1979 an aviator, ecologist and expert in the science of aircraft bird-strikes called Luit Buurma began making radar observations in the Netherlands for flight safety purposes. His plots showed vast flocks of birds over the wide waters of the IJsselmeer that turned out to be swifts from Amsterdam and the surrounding region. Every evening in June and July they flew towards the lake, and between nine and ten o'clock they hawked low over the water to feed upon swarms of freshwater midges. Just after ten they began to rise, until fifteen minutes later all were more than six hundred feet high, gathered together in dense, wheeling flocks. Then the ascent began: five minutes later they were out of sight, and their vesper flights took them to heights of up to eight thousand feet. Using a special data processor linked to a large military air-defence radar in the north of Friesland to more closely study their movements, Buurma discovered that swifts weren't staying up there to sleep. In the hours after midnight they came down once again to feed over the water. It turns out that swifts, beloved *genii locorum* of bright summer streets, are just as much nocturnal creatures of thick summer darkness.

But he made another discovery: swifts weren't just making vesper flights in the evenings. They made them again just before dawn. Twice a day, when light levels exactly mirror each other, swifts rise and reach the apex of their flights at nautical twilight.

Since Buurma's observations, other scientists have studied these ascents and speculated on their purpose. Adriaan Dokter, an ecologist with a background in physics, has used Doppler weather radar to find out more about this phenomenon. He and his co-workers have written that swifts might be profiling the air as they rise through it, gathering information on air temperature and the speed and direction of the wind. Their vesper flights take them to the top of what is called the *convective boundary layer*. The CBL is the humid, hazy part of the atmosphere where the ground's heating by the sun produces rising and falling convective currents, blossoming thermals of hot air; it's the zone of fair-weather cumulus clouds and everyday life for swifts. Once swifts crest the top of this layer, they are exposed to a flow of wind that's unaffected by the landscape below but is determined instead by the movements of large-scale weather systems. By flying to these heights, swifts cannot only see the distant clouds of oncoming frontal systems on the twilit horizon, but use the wind itself to assess the possible future courses of these systems. What they are doing is forecasting the weather.

And they are doing more. As Dokter writes, migratory birds orient themselves through a complex of interacting compass mechanisms. During vesper flights, swifts have access to them all. At this panoptic height they can see the scattered patterns of the stars overhead, and at the same time they can calibrate their magnetic compasses, getting their bearings according to the light polarisation patterns that are strongest and clearest in twilit skies. Stars, wind, polarised light, magnetic cues, the distant rubble of clouds a hundred miles out, clear cold air, and below them the hush of a world tilting towards sleep or waking towards dawn. What they are doing is flying so high they can work out exactly where they are, to know what they should do next. They're quietly, perfectly, orienting themselves.

Cecilia Nilsson of the Cornell Laboratory of Ornithology and her team have discovered that swifts don't make these flights alone. They ascend as flocks every evening before singly drifting down, while in the morning they fly up alone and return to earth together. To orient themselves correctly, to make the right decisions, they need to pay attention not only to the cues of the world around them, but also to each other. Nilsson writes that it's likely that swifts on their vesper flights are working according to what is called the *many-wrongs principle*. That is, they're averaging all their individual assessments in order to reach the best navigational decision. If you're in a flock, decisions about what to do next are improved if you exchange information with those around you. We can speak to each other. Swifts have no voices, but what they can do is pay attention to what other swifts are doing. And in the end it can be as simple as this: they follow each other.

The realm of my own life is the quotidian, the everyday. It's where I sleep and eat and work and think. It's a space of rising and falling hopes and worries, costs and benefits, plans and distractions, and it can batter and divert me, just as high winds and rainfall send swifts off course. Sometimes it's a hard place to be, but it's home.

Thinking about swifts has made me think more carefully about the ways in which I've dealt with difficulty. When I was small I comforted myself with thoughts of layers of rising air; later I hid myself among the whispers of recorded works of fiction. We all have our defences. Some of them are self-defeating, but others are occasions for joy: the absorption of a hobby, the writing of a poem, speeding on a Harley, the slow assembly of a collection of records or seaside shells. 'The best thing for being sad,' said T. H. White's Merlin, 'is to learn something.' All of us have to live our lives most of the time inside the protective structures that we have built;



none of us can bear too much reality. We need our books, our craft projects, our dogs and knitting, our movies, gardens and gigs. It's who we are. We're held together by our lives, our interests, and all our chosen comforts. But we can't have *only* those things, because then we can't work out where we should be headed.

Swifts aren't always cresting the atmospheric boundary layer at dizzying heights; most of the time they are living below it in thick and complicated air. That's where they feed and mate and bathe and drink and *are*. But to find out about the important things that will affect their lives, they must go higher to survey the wider scene, and there communicate with others about the larger forces impinging on their realm. So I'm starting to think of swifts differently now, not as angels or aliens, but as perfectly instructive creatures. Not all of us need to make that climb, just as many swifts eschew their vesper flights because they are occupied with eggs and young – but as a community, surely some of us are required, by dint of flourishing life and the well-being of us all, to look clearly at the things that are so easily obscured by the everyday. The things we need to set our courses towards or against. The things we need to think about to know what we should do next. Swifts are my fable of community, teaching us about how to make right decisions in the face of oncoming bad weather, in the face of clouds that sit like dark rubble on our own horizon.