



Illustrated by Eldar Zakirov

Hive

Jay Werkheiser

Excitatory pheromones.

Talkers detect the scent of the flyer pheromones and add their own scent cues to strengthen the signal. Talkers at Hive's central nest determine that the pheromones come from a direction up the magnetic field lines. Nearby directors release steroid pheromones to alert the fighters in that area. It is an autonomic response.

Secondary signals pinpoint the source slightly rotationward of the prime field line. Flyer pheromones are airborne, limited, excitatory, or inhibitory only. Directors release a spray of pheromones that, in the confines of the nest, rouse crawlers from their slumber.

The crawlers detect the excitatory scent and move in that direction. Crawler pheromone trails mark the path for Hive to follow. Hive anticipates their return trails, heavy with details embedded in their scent. But the leading edge of the crawler trail creeps slowly from Hive and

will return as slowly. A quarter rotation, perhaps. Wait.

Director pheromones flood the nest, circulating speculation. A hive that uses methylated communication pheromones sometimes sends fighters from odd directions, testing Hive's borders. A whiff of steroids appears and vanishes, rejected by consensus. It's too soon for that. Still, nearby fighters wriggle with agitation at the brief scent. Another pheromone burst suggests destructive oxidation of the spore forest in that direction, rare at this point of the heat/cold cycle. The scent fades.

Hive activities continue unheeded. Harvesters return from antirotationward, heavy with the scent of amino acids and carbohydrate chains. A good harvest. Winds blow from downfield, bringing scents from Hive's neighbor. That hive uses biphenyl-based communication pheromones, with reversed-chirality branch points, making its messages difficult for Hive's talkers to read.

Genetically modified talkers translate the scent into readable pheromones. Biphenyl offers genes for improved mandible chitin in the harvester genome. That would be useful, especially if Hive could adapt it to match the chitinous armor of Methyl's fighters. In exchange, Biphenyl wants the flyer genome. Fair trade, considering the pheromone mismatch. Hive waits, hoping to develop a flyer species that can understand Biphenyl's pheromones. Improved trade value.

Flyers continue to release excitory pheromones. The air upfield of the nest must hang heavy with the scent. Curiosity becomes impatience. Directors release pheromones that send nearby talkers out to reinforce the pheromone trails leading back to the nest. The first of the crawlers finally return, their pheromone trails rich with detail.

* * *

Hayden scanned the landscape with binoculars, sweeping at wide angle over broad reddish-brown plains studded with tube-stalks. Brit had described them as roughly equivalent to a sporophyte stage of something or other. Hayden just called them ugly.

"See any more of those damned flying bugs?"

"Brit says not to call them that. Whatever they are, they ain't bugs like back on Earth."

Matt barked a short laugh. "Ain't that the truth. I'd like to get a close look at how those rotor-wings of theirs work. Damned if they're not living hover-drones."

"You and Brit both. Says she can't figure out how something like that evolved naturally." Hayden continued his binocular sweep, now scanning more uneven ground with tufts of some sort of low-lying vegetation. Well, not really vegetation, according to Brit. They weren't plants in the Earth-life sense. She'd tried to explain the differences—something about cell walls and organelles—but Hayden couldn't put it into his own words to save his life.

"Goddamned big bugs, though, ain't they?"

Hayden dropped the binoculars from his face and let them dangle from his hand. Brit had explained that too—low gravity, thin atmosphere, anomalously high oxygen content. He sighed. No sense trying to explain that, either. Matt wasn't going to stop talking about giant helicopter bugs no matter how many explanations he got. "Well, just leave 'em be unless Brit tells you to collect a sample."

"They're annoying, buzzing around all the time," Matt said. "One of 'em gets too close to me, I'll swat it outta the sky." Matt swished his hand through the air, demonstrating his swing.

Hayden opened his mouth to object, but Brit's voice from behind made him jump out of his skin. "You'll do no such thing," she said.

Hayden bobbed the binoculars and spun his head to see her. She'd picked a bad moment to come strolling out of the rover, that was for sure. "I was just telling him—"

"I'll tell him." She gave him a look that could make puppies whimper. "You do *not* touch the local life. Ever."

Matt shrugged. "They stay away from me, I'll stay away from them."

Brit cast a burning gaze on Hayden. "Keep him in line." She stormed back into the rover.

Matt huffed. "Dunno why she's got such a hard on for the nasty things."

"She says they show signs of eusocial behavior, like bees back on Earth. Thinks they might

have some smarts.”

“Well bees ain’t all that smart.”

“I’m just telling you what she told me. I’m no scientist,” Hayden said. “But she was very clear—they might be intelligent and we are not to harm them.”

“Damned science nerds think they run the show.”

Hayden locked him down with a hard glare. “She’s in charge of this expedition. Cap’n made that very clear.”

“Well she wouldn’t even be here if it wasn’t for us carting her ass around.”

“I’m in charge of driving the rover. She’s in charge of the trip. End of—”

“What in hell is that?”

Hayden swiveled his head in the direction of Matt’s gaze. He took a moment to find it, a multi-legged atrocity the size of a small dog. He instinctively jumped back even though the thing was still a few dozen meters away.

He remembered his binoculars and brought the thing into focus. His first thought was “centipede,” but that was only because of all the legs. Otherwise, it looked nothing like the creepy-crawly from Earth. Its skin looked soft and leathery, not at all like an insect shell. And the legs. They seemed to lack any sort of joint; they just, well, flowed like tentacles, sort of. He watched, fascinated, as the front-most legs moved, stiffening in some places while wiggling in others, never the same place twice. “Now how the hell does it do that?” he muttered.

“Dunno what you mean,” Matt said. “But it brought friends.”

“What?” Hayden pulled the binoculars from his eyes and took in the whole view. Matt pointed out two more of the things, and as he scanned the landscape, he noticed a few more. And they all seemed to be coming toward the rover.

“Aw, hell.” He pulled out his phone and commed Brit. “Ya better get out here and take a look at this,” he said.

* * *

Crawler pheromone trails. Pheromone chains alkylated in patterns rich with detail. Talkers decipher the information and secrete their own pheromones in the nest, acting on the directors’ chemoreceptors.

New body forms. The new forms lack scent markers of predator or prey. Deep within the nest, directors speculate. Methylated pheromones, with halide markers indicating genetic modification. The scent fades as the crawler trails lack indicators of the presence of methylated communication pheromones surrounding the new bodies. Airborne ketones, an inactive version of the pheromones that would prompt the hive to split. Perhaps, but a new hive in the area would share pheromone markers with its parent, and nothing like any local hive’s pheromones show in the crawler trails.

Directors writhe in agitation, unable to find a pheromone-thought that fits the data. Hive’s workers continue their tasks without direction. Builders burrow tunnels past their anticipated endpoints. Scavengers scour already clean pathways. Harvesters leave the nest to bring back another harvest even though the light/dark cycle has progressed dangerously close to dark.

The realization brings a new wave of director pheromones. Biphenyl comm pheromones. Other directors pick up the signal, amplify it. Yes, the winds shift with the change of the light/dark cycle. Airborne pheromones drift toward Biphenyl hive. A reply is due, but more can be sent. Pheromones encoding a query, perhaps also coded information about the new body forms.

A scent of crawler control pheromones rises. Yes, better. Airborne pheromones are limited, slow. A request for a meeting of crawlers and talkers. Hive’s tunnels are rich with the scent now as directors reach consensus. Crawlers mobilize, emerge from the nest, and march down the field lines. Talkers follow the pheromone trails.

Light fades, and the winds shift. Talkers still within the nest climb to the surface and release a cloud of airborne pheromones tailored to Biphenyl’s receptors.

Wait.

* * *

Hayden gazed through the rover's windshield. "Looks like they've gone," he said.

"They come back," Matt said, "and I'm opening the gun locker."

"Can it, grunt." Hayden turned to look at the expression that accompanied Britt's acidic voice. "They're just checking us out."

Hayden quickly spoke up before Matt could say anything else. "Why are they so interested in us? I thought you said we're not biologically compatible."

Britt shrugged. "Curiosity? Same reason we're out here. We have a lot to learn about this world."

"I don't like it. Maybe we should pack up, head further east." Hayden peered through the windshield. "See what else is out there."

Britt waved the idea away. "I'd like to learn more about this area first."

Matt chuckled harshly. "For once, I agree with Britt. If these things are a threat to the colony, we better take care of it now."

Britt focused a stern gaze on him. "I don't see why they'd be a threat."

"Dunno," Matt said. "But they're annoying, always zipping up, buzzing around yer head, and flying off again."

"Always to the south," Hayden muttered. He realized with a start that he had spoken aloud. "They always seem to come from the south," he said more confidently. "And head back that way too."

"I never noticed that," Britt said. Hayden liked the sound of approval that tinged her voice. "Good observation. I wonder if they have a nest or something down there."

"Maybe we should head down that way," Matt said. "Find the nest, burn 'em out."

Britt glared heat. Hayden jumped in before words could explode from her mouth. "What is it with you?" he said. "Always wanting to kill stuff."

Matt shrugged. "Better them than us."

Britt fired back with a harsh retort, but Hayden didn't hear what it was. His attention focused on a cluster of spore stalks to the south. Several somethings were moving around in there. He fumbled for his binoculars and brought them to his eyes. Three, maybe four . . . no, at least five of them. About the size of the crawler things they'd seen earlier, except with big, serrated mandibles and the musculature to work them. One of the stalks came down, then another. Mandibles grabbed the stalks and carried them southward.

". . . have anything to say?" It was Britt's voice, he realized. "Have you even been listening?"

In answer, he handed the binoculars to her and pointed.

* * *

Crawler pheromone trails continue bringing detail from upfield. The markers defining the new body forms suddenly disappear from the information trails. Talkers search the trails closely for more detail. Nest marker pheromones, but appended with a propyl group indicating motion across field lines. Chirality of the propyl branch point indicates motion rotationward.

A moving nest? Could the new body forms be part of a hive? Excitory pheromones roil in the nest's air. The surge drops off rapidly as directors one by one reach the same conclusion. Inhibitory pheromones dominate, mixed with comm markers, a reminder of the body forms' lack of identifiable pheromones. How would it self-organize? How would it communicate with other hives? No, these are simply things, predators or prey.

And yet they lack those scent markers, too.

Talkers release a new round of excitory pheromones. Crawlers report harvester pheromone trails intensifying in the upfield spore forest. Directors fill the nest with communication pheromones, reconstructing their mistake. With the directors distracted, harvesters work autonomically. Without direction, one finds a faint pheromone trail and follows it to a spore forest. Its travels back and forth to the hive to reinforce the trail and others follow. Now many harvesters work near the mysterious new bodies.

Directors release predator markers, a sign of danger. The markers mingle with scents that trigger the genetic modifications that turn embryos into fresh harvesters. Perhaps, but if these are lost, replacements won't grow soon enough. Directors again spray a variety of scents,

searching for a better solution.

Hive should be in dark phase defensive posture by now. Pheromones go out to talkers; send crawlers to erase the harvester trails as they return from the upfield spore forest. Talkers send recall scents on the wind. Hive's bodies need rest. Directors send out a final signal, a chlorinated aldehyde that sends the reserve flyers upfield as an early warning line.

A lone director emits a puff of methylated communication pheromone. Yes, the other directors agree, that is a good question. What is Methyl hive doing right now? Fighters fidget at the autonomic burst of excitatory pheromones in the nest.

* * *

The planet's short night was nearly over, the first hints of pink tingeing the eastern horizon, when the last of the tree cutters turned and dragged its stalk south. With days only ten hours long, skipping a night's sleep wasn't much of an ordeal, and tonight was Hayden's watch.

He'd spent much of the night watching the tree cutters work. Turned out they were warm-blooded, so switching his binoculars to IR gave him a good view. About halfway through the night, it occurred to him that they came and went along two or three specific paths. Weird, he'd thought, and sent a message off to Britt's tab. Another thing—other, smaller critters scurried along the same paths, doing something or other as they went. Another message sent, this time with a brief video clip captured from the binoculars. Let Britt earn her pay when she woke up.

Hayden blinked. What the hell just happened? He'd let his mind wander and . . . well, that last tree cutter just went down. Dragging its tree stalk thingie one moment, then down like a sack of rocks the next. Infrared-bright fluid spurted. Little critters scattered. What the hell?

Wait . . . did something move? It looked like something dark momentarily obscured the dying creature. Whatever it was, it wasn't warm-blooded. He switched the binoculars to light-amplification night vision.

It was smaller than the tree cutter, but it made up for it with long serrated forelegs it wielded like knives. Hayden watched it carve into its poor victim like it was a Thanksgiving turkey. And it brought friends. At least three others, fanning out, chasing down the little scurrying things.

"Damn." He belatedly remembered to activate the binoculars' record function. Britt was going to ream him for missing so much of the action.

"What's going on?"

Britt's groggy voice broke his focus. He twitched, turned his head to see her leaning on the back of the driver's seat, rubbing her eyes. "Damn," he said again and turned the binocs back toward the gruesome scene outside. They're still recording, he thought.

"What?" she said, this time more insistently.

Holding the binocs as steady as he could with his left hand, he tapped the rover's console and brought up a real-time feed from the binocs.

"I don't get it."

Hayden looked at the green-tinged enhanced image on the display. Stalk cutter lying still, the first of its little friends slowly returning. "What the—it was just there. Gimme a sec." He scrolled back to the beginning of the video file and tapped play.

Britt's mouth opened into a wide O.

"My thoughts exactly," Hayden said.

"Did . . . did you see what happened? I mean, before . . ."

Hayden nodded. "Saw them take down the stalk cutter. Well, sorta. It was fast."

"Predators usually are."

Hayden noticed her hands dancing on her phone's keyboard. "What are you doing?"

"Trying to get the ranged CT scanner aimed properly."

"Can it reach that far?"

"We're going to find out . . . ah, there."

"Got it?"

"It's blurry, but yeah. And another. Oh, damn."

"What?"

She sent some image files to the rover's main display, and Hayden tapped to accept them. The images looked like fuzzy black-and-white stripes and swirls.

"I have no idea what I'm looking at," Hayden said.

"It's hard to say for sure, but I'm not seeing much room for a brain in any of them."

"They don't have brains?"

"Well, there's probably some neural mass up there," she said, pointing at a streaky blur, "near that cluster of sensory organs. But probably just enough to process the senses." She poked her finger at a different blur. "Same with these predators, except I think there are little mini-brains to operate the mandibles and limbs."

"So they're not intelligent, then?"

"I can't see how they could be, not with so little space for brain tissue."

"They seemed pretty, I don't know, coordinated." Hayden let his skepticism bleed into his voice. "Like it was a planned attack."

"Pack hunters on Earth coordinate their attacks at least as well," she said. "Even some types of sharks, and they're not all that intelligent."

"I suppose so."

"Oh!" Britt's mouth again hung open. "Did you see that?" She tapped the screen. Rewind, play at half speed. "There."

It took Hayden a moment to realize she'd switched her attention back to the IR stream, still running on a secondary display. The dark form of the predator briefly eclipsed the IR-hot corpse. Hayden's eye stayed on the bright light source, but Britt's finger guided his gaze away, toward the direction where the predator had gone. Then . . . a flash of light. "What was that?"

She zoomed the display. "Look closely."

He did. When the flash of light appeared, he could see the outline of the predator's . . . well, head, he guessed it would be called. Cluster of sense organs and gaping maw. And inside that maw was light. He could clearly see the razor ridge of its teeth, or rather teeth-like serrated ridge, silhouetted against the light. Not visible light, he reminded himself. Infrared. "It's hot inside?"

"Warm-blooded. But its body heat doesn't show through its skin. It's shielded somehow."

"Shielded?"

Britt nodded. "I have no idea how, let alone how something like that might evolve, but yeah."

Matt let out an exaggerated yawn, drawing Hayden's attention away from the video. "You guys gonna yammer all night?" Hayden swiveled his chair and saw Matt sauntering up to the copilot's seat. "Whatcha talking about, anyway?"

Crap. Hayden could only imagine what kinds of ideas the video would put into Matt's pea brain. None of what he imagined was good.

* * *

Excitatory pheromones awake fighters from their slumber. Crawler trails show one harvester lost. Some talkers, too, but they reproduce quickly. A director coins a pheromone to indicate the new body types, an unbranched chain with no side group markers for status. Uncertainty pheromones circulate as well—are the new bodies responsible? Are they predators? The directors are unable to reach consensus.

The confusing cocktail of pheromones agitates bodies near the nest. Flyers buzz in circles, talkers seek out trails to follow, fighters snap their mandibles at each other. Directors spray inhibitory pheromones to quiet the nest while they think.

Crawlers arrive from downfield. Talkers read their trails, news from Biphenyl hive. Straight chain pheromones indicating the new body types, tagged with side chains pointing antirotationward. Chain length indicates many of them. Directors emit involuntary scent puffs at the news. A questioning scent of danger pheromone predominates. Talkers respond with inhibitory scents. Biphenyl reports no danger. Communication? Negation pheromones.

Biphenyl cannot communicate with them.

A new round of pheromones flood the nest. Not hive, nor predator, nor prey. What are these new bodies? Inquiry pheromones with no consensus on an answering scent. Directors work on too many problems at once. Straight chains of new body questions, biphenyl flyer questions, methylated pheromone questions. The nest stinks of confusion.

A scent emerges—methylated steroids mixed with harvester pheromones and unbranched chains. The other directors take a few moments to pick up the meaning. Methyl attacked Hive's harvesters and is likely to attack the new bodies as well. The action may already be complete.

One by one, directors begin amplifying the signal. Bodies mobilize—flyer scouts, crawlers to lay down the trails, fighters to follow. They head up the field lines. A director floats a new idea, and others quickly amplify the scent. The nest fills with pheromones indicating trade, flyer genome, biphenyl. Yes, a very good idea indeed. Append the subtle scents of defensive steroids, and the trade seals an alliance. A last minute puff of biphenyl pheromones sends crawlers and talkers downfield with a new set of biomolecular instructions.

* * *

Hayden flipped the sun visor to the left, blocking at least some of the glare from the rising sun. The colony had radioed in during the night; they'd been seeing an uptick in the number of those crawly things. New orders, divert south and see where they were coming from. And if they were a threat.

Britt had been pissed. He didn't need to look back at her to know she still wore a sour frown, arms folded tightly. Matt's smile glowed brighter than the sun. "Bug hunt," he said for the third time. "Game over, man!"

"Just keep your ass in that seat," Hayden said. "You take one step outside the cabin and I'll let her," he poked a thumb over his shoulder at Britt, "skin you alive. Hurt one of them critters and I'll help her."

Britt let out a soft humph but said nothing. Matt's grin didn't fade. Then he glanced at the windshield, and it did.

Hayden followed his gaze. "Shit."

"What is it?" Britt's voice carried a hint of concern. A moment later she added, "What the hell?"

Crawling things—lots of them—worked their way across the jagged landscape. Their little friends followed in their wake as usual, but . . .

They were big, a lot bigger than the crawlers, with razor-sharp mandibles and scythe-like forelegs. They could have been relatives of the predators Hayden had seen last night. They shambled along, a row of them following each crawler. Blocking the path ahead. Hayden stopped the rover.

Matt stood. "I'll get the gun."

"Siddown," Hayden said. "Let's see what they're up to."

Britt hung over his shoulder. "Are you capturing video?"

"Damn." Hayden activated the rover's cam and tapped the record icon. "Getting it now."

"Looks like the leading crawlers are setting down some sort of pheromone trail."

"Why would they do that?"

"I don't know." She paused thoughtfully. "Maybe to lure a mate or something, but the other species evolved the ability to detect the lure. Coevolution happens all the time."

"But for what purpose?"

Britt shrugged. "I don't know; I'm speculating. Maybe to find food sources. Or their own mates."

"Well whatever the hell they want," Matt said, "we seem to be in the middle of it."

Hayden watched the lead crawlers fan out around the rover. The big nasties took up positions behind the crawlers and stayed put. The crawlers moved ahead, depositing another set of big nasties, until the rover was surrounded.

"Ain't looking good, is it?" Matt's voice dripped acid.

"I've never seen anything like it," Britt said. "Such close cooperation among species, the coordination . . ."

"Almost like it's an alien planet," Hayden said. He chuckled, mainly to soothe his own nerves.

"Well if they move in—"

"Can it, Matt."

"No," Hayden said. "He's right about that much. If they think we're some kind of prey, we may need to defend ourselves."

Britt turned her gaze on him. "You too? And how do you think they're going to get at us?"

"Those claws look awfully sharp," Matt said.

"Hell, I doubt they can get through the rover's hull," Hayden said. "But they could do damage. Strand us."

"They're animals," Britt said. "Complex animals, to be sure, but I don't see why they'd have any interest in attacking a rover. I doubt they even know there's anything living in here."

* * *

Information arrives rapidly now, with the wind blowing from upfield. Flyer pheromones are all excitory now. The next generation of flyers includes genes for more varied pheromone glands, but they are still eggs. Talker pheromones are more attenuated. Straight hydrocarbon chains, steroids, methylated communication pheromones.

The news sends the directors writhing in agitation. Methyl surely plans an attack. It wants the new bodies, Hive's directors agree on that. Maybe as food, maybe trophy, maybe to examine their genetics. New genes mean new capabilities, and that could give Methyl an advantage.

Upfield talkers report fighters in defensive position. Information from downfield arrives more slowly with the arrival of crawlers. Biphenyl's fighters watch for Methyl attack on the nest of new bodies.

Directors spray negation pheromones at the nest concept. What, then, if not a nest? Disagreement roils the air. Can unintelligent bodies nest? Some species genetically related to Hive's kind exhibit pseudo-hive behavior. Perhaps these new bodies are similar.

A puff of straight chains and negation scents, a reminder that the new bodies are not at all genetically similar to Hive. Or any other life. More chaos in the nest as directors debate. The thought is cut short by a gust of wind from upfield.

More excitory pheromones, and a burst of methylated chains. The scent of circulatory fluid. Methyl's attack has begun.

* * *

Matt scowled at the alien picket outside the windshield. "What the hell are they doing?"

"Not a clue," Hayden said, hoping to derail the conversation before it started up again.

Britt didn't take the hint. "Wait and see," she said. "This is the fun part of biology."

"Wait and see?" Matt snorted. "Well if they make one hostile move, they'll get a piece—"

"Can it."

Hayden saw a flicker of motion. He immediately activated the camera and tugged on Britt's sleeve. One of the clawed things was down in a spray of circulatory fluid before he saw what had happened. Others moved to cover its spot. His mind slowly processed the images; one of the predators from last night had slashed through the carapace of the creature like it was made of paper. Two others followed behind it, moving to engage the rest of the defenders.

"I hope you're getting this—"

"Cam's running," Hayden said. "Jeez, it's like a war out there."

"Competition for resources."

Hayden gave her a sidelong glance. "Looks pretty organized."

"Ever watch army ants?"

A predator broke through the line, cutting off Hayden's reply. The thing charged the rover; a blur of mandibles and razor blades. It was at the rover's hull before Hayden could flinch. Its razor claws clanged against the wall.

“Jesus,” Matt said. “The damned thing is going to claw through the hull.” He yanked the weapons locker open.

Hayden moved to stop him, then sat back down. The thing really was trying to claw its way in. He doubted it could get through, but it if cut the tread . . .

“Just be careful; that thing is *fast*,” Hayden said. “And don’t engage unless you have to.”

Britt said, “You’re just going to let him kill it?”

“He’ll be lucky if it doesn’t kill him.”

The rover’s door hissed open, cutting off further debate. Hayden switched on the wind-shield’s HUD and flipped to the input from the starboard camera. The predator was slashing at the aft end of the rover. Each blow sent a shock through his seat. He couldn’t see well, but it didn’t look like the thing was making much headway.

A loud crack jolted him upright in his seat. Did it break through . . .

Another crack. And another. He noticed belatedly that the predator twitched with each crack.

Britt squealed. “Is he shooting it?”

“I don’t—” Hayden stopped in mid-thought. The action was too fast to follow. The predator surged forward in a blur of activity then seemed to slip and fall centimeters from Matt. Its head rolled past his feet. Matt’s eyes widened after the fact, and he stumbled back, dropping his rifle. Circulatory fluid covered his shirt. Blue circulatory fluid, not red.

“Get the hell back inside,” Hayden said.

For once Matt didn’t argue. He climbed back into the rover’s cabin, bringing an earthy, copery odor with him. Hayden swung the door shut behind him before the predators got any more ideas.

“Take a look at this,” Britt said.

Hayden looked at the HUD. Britt had reworded the footage and was playing it back on slow-mo. Hayden’s eyes widened as he watched a bullet skim off the predator’s carapace. It turned its dark, dead eyes on Matt and charged, its legs a blur even at this frame rate. Two of the opposing predators angled in on it from opposite directions. It slashed with its razor leg at one of them, opening a deep gash along its entire torso. But the other one’s mandibles caught it at the back of the neck, neatly decapitating it.

“We should go,” Britt said.

She didn’t have to tell Hayden twice. He slammed his foot on the accelerator. He picked out the gap in the picket line left by the downed defender and punched the rover through before the creatures could close it.

“Damned vicious animals,” Matt said. For the first time in a long time, his voice sounded shaken. “Think they’re smart enough to be a threat to the colony?”

“That kind of speed has to be pure reflex,” Britt said. “Those mini-brains control the limbs; there’s no intelligence behind it. If any kind of intelligent life exists on this planet, we won’t find it around here.”

* * *

Airborne pheromones from upfield give tantalizing hints of the action. Methylated talker pheromones, excitory flyer scents, the occasional puff of the chelated copper compounds in circulatory fluid. Returning crawlers fill in details excruciatingly slowly.

Methyl’s fighters retreat. New bodies move back toward their nest. Crawlers from Biphenyl report the retreat of Methyl’s fighters from the pseudo-nest downfield as well. The new body forms are safe. For now.

With time to think, Hive returns to the fundamental question—what are these new bodies? They nest, but lack even the most rudimentary communication pheromones. Where had they come from? Directors release pheromones for each possible direction—upfield, downfield, rotationward, antirotationward—but all meet negation pheromones. Another hive would have spotted them first, and pheromones of their arrival would have blown on the winds.

Hive traces the pheromone trails of the mind back, far back, to when there was only one hive. Back through cycles of growth, splitting, and expansion, first up and down the field lines, later

perpendicular to them as land and resources become scarce. Hives multiply and adapt to new environments, and divergent pheromone lines evolve. Too different; communication is lost. An alkyl-based pheromone hive selectively breeds talkers. Forms spread, diverge, evolve, and hives begin engineering other specialized forms. The beginning of the trail of civilization.

The new bodies belong to no known evolutionary line. Where did they come from? The nest is again flooded with negation pheromones for all possible directions. A director emits a new pheromone puff—upward.

There is the vast unknown above the world, a space just first being explored by body forms like Hive's flyers. What if Hive engineered them to fly higher? Perhaps to the distant lands above that drive the cycles of tides? What would Hive find there?

Surely the new bodies did not belong to an intelligent hive; they had no means of organizing or communicating. Dumb animals, perhaps the prey of some new type of hive, an alien intelligence.

Hive's directors spread hormones to direct flyer reproduction in the right direction. Debate begins—send talkers to Biphenyl or attempt it alone? One way or another, Hive intends to find the alien intelligence that surely nests out there.

Jay Werkheiser teaches chemistry and physics. Pretty much all the time. His stories are sneaky devices to allow him to talk about science in a (sort of) socially acceptable way. Much to his surprise, the editors of Analog and various other magazines, e-zines, and anthologies have found a few of his stories worth publishing. Many of those story ideas came from nerdy discussions with his daughter or his students. He really should keep an updated blog and a author page, but he mostly wastes his online time on Facebook, MeWe, or Twitter (@JayWerkheiser).