

Frick and Frack, or
Take Your Fledgling to Work Day
By Myles Bakke

Operating at full throttle, the roar of the diesel engine on the bobcat skid loader should have been loud enough to scare off any wildlife within a quarter mile. I was loading previously gathered piles of brush onto the bed of a dump truck for transport to another huge brush pile within the Cowling Arboretum at Carleton College, where I was working. The worksite was an old field that was being cleared for a future prairie and oak savanna planting. On the front of the loader, the hydraulic jaws of the grapple bucket were wide open as I eased the lower deck of the bucket under the edge of the large pile. I clamped the jaws down and bit into maybe a third of the debris; as I pushed the entire pile forward a foot or so. The noise and large pointed teeth on the powerful jaws gave the machine a formidable and intimidating countenance. But I knew it wouldn't matter.

In the distance in front of me was a line of oak trees, and, instead of picking up the brush, I watched and waited. She dropped from a limb and covered about two thirds of the 60 or so yards in seconds with powerful pumping wing beats before going into a low glide directly at me. Setting her wings and veering a couple of feet to the left at the last second, she landed awkwardly only seven or eight feet in front of the brush pile. A meadow vole had raced out of the pile, and Frack, the young female red-tailed hawk, had spotted it from her perch more than half of a football field away. The scrabbling vole slipped through her grasp and managed to get behind her. Suddenly, in a blur of motion, a second hawk swooped in from the side and nabbed the hapless mouse. It was her sibling, Frick, a smaller and somewhat less accomplished male, who showed up late but lucky. Unaware, Frack kept backing up, looking for her lost prey, lifting her feet and looking back and forth, like someone who had dropped a quarter, but didn't see where it had rolled. In the meantime, Frick wasted no time swallowing the vole whole. When Frack looked back, Frick tried to look innocent, glancing around like he was helping with the search. She seemed to buy his act for a moment and continued her hunt, while her brother made more disingenuous efforts of assistance. It was wonderfully hilarious, sneaky little brother stuff, only about 15 feet from where I sat. Finally, in her frustration – and probable suspicion – she jumped at him, and he flew off. I could almost hear her call him “Vole Breath,” as he left.

The pair had been dogging me for several weeks. Sometimes I would find one of them sitting on a brush pile in the morning, waiting for me to arrive. Their parents had built a nest high in a pine tree only about 40 yards from the arb office and had been using it for several years. The tree was in a small patch of woods, but was also near several student-housing units, so human activity near the nest site was fairly common.¹

I never expected to have the privilege of these close encounters with these usually wary birds, but they may occur more often than one might suspect. Farmers using equipment in the same areas year after

¹Their prey includes a diverse number of species, but one stands out. Voles make up 80% or more of their prey at certain times of the year. Larger prey shows up at nest sites in good numbers, and may indicate a shift in hunting because of the high demand for groceries by their growing young. At the nest near the Arb office, I've found rabbit, red and grey squirrel, marmot, pocket gopher, crow, and pheasant bones and body parts. Snakes, moles, and other small birds and mammals have also been reported as occasional food items. Most of these creatures, however, are a relatively small percentage of the red-tailed hawk's overall yearly diet. It's not uncommon for these birds to nest in cities, usually on building ledges or in suburban parks, where human proximity is limited by access, and prey species shift from rural to urban. City hawks must make a living from squirrels and pigeons.

year, mowing hayfields for example, might have similar experiences. Many years ago, I was exploring a large nighttime crow roosting area, examining crow pellets. In doing so, I found three or four pellets that contained meadow vole remains. Crows regurgitate pellets, as do birds of prey, gulls, and a number of other birds. Most crow pellets are not as well formed as, say, owl pellets. They often tend to be amorphous globs of ground-up seed coating and nutshells. Sometimes they have fur and bone material ingested while scavenging carrion. Several of the pellets with vole material contained more than one vole in each pellet. These animals were not picked up as road kill; this was the result of active hunting.

I had never heard of crows actively hunting voles and couldn't believe they might be capable of doing such a thing. Thinking they might be owl pellets, although the possibility of an owl sleeping in such a place seemed beyond remote, I disassembled one of the pellets. The presence of gizzard stones (gastroliths) confirmed they were, in fact, crow pellets. Crows have muscular gizzards;² owls and hawks do not. Some stones are always regurgitated within a crow pellet, making their presence diagnostic. I also found some ground up seed material in the pellet. If there were capable of hunting, why had I never found pellets like this before? The conundrum vexed me for several years, until one day when I was mowing a first-year prairie planting to control weed competition. Three crows flew in and landed in an adjoining tree line, to watch as I removed the canopy cover from the field. I stopped my tractor and watched as the crows flew down and caught four meadow voles made vulnerable by the sudden loss of cover. Mystery solved. Crows are known for their intelligence and adaptability,³ so while I was impressed, it made sense that they could exploit this new opportunity. But crows are not particularly threatened by people and live among us in large numbers. By contrast, red-tailed hawks are normally shy of people, usually not allowing an approach within a hundred yards.

²Birds have a two-part stomach, the ventriculus and the proventriculus. The proventriculus is the secreting portion of the stomach, producing mucus, pepsin, and hydrochloric acid. The ventriculus is the muscular division of the stomach, commonly referred to as the gizzard. It is strongly muscled in birds that eat seeds and other vegetation, and much less so in flesh- or fruit-eating (frugivorous) birds. In seedeaters, the heavily muscled gizzard in concert with its tough ribbed inner lining and swallowed stones act to grind and mechanically macerate the material to prepare it for digestion. In flesh-eaters and fruit-eaters, this part of the stomach serves as a consolidation chamber and barrier to the small intestine for the indigestible fur, feathers, and bone in the case of flesh-eaters, and the large seeds ingested with the berries eaten by fruit-eaters. This material is ejected through the esophagus and mouth, usually at roost sites by birds of prey, but may be regurgitated during the day between feedings by frugivorous birds. Owl pellets and hawk pellets differ significantly in the amount of bone found in the pellets. Owls often cast pellets that make identification of their prey easy in terms of species and number of individuals, because the bones are largely intact. Hawks, not so much. Red-tails and the rest of their genus *Buteo*, in particular, tend to retain the pellet longer and perhaps have a stronger hydrochloric acid concentration in the stomach. Whatever the reason, their pellets are often nearly devoid of bone, leaving only the paired incisors to be sorted and matched to determine the number of prey individuals. Some of these pellets are not well formed and look like they were mere splashes of wet fur when they were ejected. Others, if well formed, feel soft and compressible, indicating a lack of skull and bone materials.

³One crow tried unsuccessfully to catch a leopard frog, whose erratic change of direction and cryptic coloration proved to be superior to crow agility and intellect.

The adult female⁴ was the first in the family to recognize the profitable possibilities of a red-tailed hawk and bobcat/human symbiosis. Her benefit was obvious, while mine lay more in the realm of the pure enjoyment and fascination of watching her in action. It had all started the previous year. I had seen her perched in a bur oak about one hundred yards from where I was loading brush. It surprised me that the noise and violence of the activity didn't drive her away, so I didn't expect her to hang around long. I saw the deer mouse scramble from the brush pile that I was working on and run across a stretch of broken ground where I had recently grubbed out a number of stumps. While I had missed her launch from the oak, my eye picked up the motion of her flight, and I watched in astonishment as she zeroed in on the tiny mouse. I let the bobcat idle while she took her time eating the mouse, seemingly oblivious to the mechanical monster only a few yards away. She perched closer to my work after that and showed up almost every day for the rest of the summer to observe whether I was moving brush or grubbing stumps. If I was grubbing stumps, she lost interest quickly and didn't stay long.

One morning, while driving the skid loader along a trail to the work site, I spotted a dead 13-lined ground squirrel. It apparently had been run over by a contractor who had been hired by the college to do some work in the area. I thought about it as I drove by and then stopped and got out of my machine to have a look. The body was not badly damaged, having been pressed into the short grass on the edge of the trail, so I tossed it into the grapple bucket of my loader. A gift for my lady red-tail if she showed up this morning, I thought. I didn't see her when I got to the work site, so I put the ground squirrel in the shade at the base of a bur oak tree and got to work. She arrived about forty minutes later and perched in an oak near where I was busy working on a box elder stump. I shut down the loader and got out of the machine, curious to see if she would leave when she saw me walking around. She was only about 20 yards away, but didn't fly as I walked back to retrieve the ground squirrel. Twirling my gift by its tail and whistling to her, I approached her perch. Shifting her head from side to side, she watched intently. I slowly walked toward her, but still she didn't fly. I stopped about 20 feet away and held my prize up for inspection before lofting it gently in her direction, backing away about 10 feet while, in a low voice, explaining the freshness of my gift, and how I had thought of her when I had found it. She watched me for a moment, apparently considering my incomprehensible explanation, then flew down to examine the 13-liner. I was amazed as she stayed on the ground while consuming the ground squirrel and paid little attention to me standing only a few yards away. It was, I thought, an extraordinary show of trust on her part. When she was finished, I backed away a few yards before turning and walking back to my bobcat.

A few days later, as I was leaving the job site, I saw her sitting on the limb of a tree next to the road. I had decided to drive the heavy loader about 300 yards along the shoulder of the road, rather than on the grassy trail. A heavy rain during the night had made the trail soft, and I wanted to avoid damaging it. Just as I was coming abreast of her tree, I saw her drop off the limb and glide low in front of the slow-moving loader. She had a grey squirrel in her talons and landed on the opposite bank of the ditch. I tried to think of why she did this and kept having the distinct feeling that she was showing it to me. Probably a little delusional on my part, but it was odd.

She had shown up with her mate (a noticeably smaller bird with darker breast markings) a couple of times before this incident. He was more wary and never came within 50 yards of me. Once when she caught a vole I had flushed for her and flew to a nearby tree, he joined her, but she didn't share her catch. If I'm honest, I was a little pleased. Petty, I know; he was just being a wild hawk, with a

⁴Females are, on average, larger than males, but this only becomes apparent when the pair is together. Individuals may have differing marking, but they are not sexually diagnostic.

justifiable mistrust of a species that had persecuted his for generations.⁵ Still, he had snubbed me; so let him catch his own vole.

Frick and Frack first showed up the following summer and watched as their mother demonstrated the proper technique in using a Bobcat to dispatch a mouse. The youngsters lacked the colorful tail feathers of the adults, showing instead multiple dark bars across their brown tail feathers. Frick, the smaller male, had a well-defined bellyband of dark brown mottled feathers, while sister Frack's belly was lighter with fainter brown markings.

I had named them after a comedy skating act from the thirties, whose bungling performance combined expert skating, timing, and choreography to affect slapstick shenanigans. The birds flew beautifully but landed haphazardly, sometimes getting in each other's way and thwarting success. Maneuvering and balancing on the ground with no branches to hang onto seemed foreign and not yet mastered. Life on the loose meant new experiences and new mistakes like Frick misjudging the sturdiness of a weed stalk as an intended perch, and flailing embarrassingly to the ground into a patch of nettle so thick he had to walk out of it, while I watched, eating a sandwich. It is always nice to have a little cabaret with lunch.

Mom was a presence for only a week or so, and then I only saw her occasionally, watching from a distance. I had been co-opted as a red-tailed nanny/daycare provider and apparently a training aid. Not that I minded; it was an unprecedented opportunity to watch these young birds develop from burlesque to the legitimate stage. It was also an occasional exciting break from my regular work routine. If I were grubbing stumps, Frack might fly in to sit on a brush pile, and I could see her calling. They both made begging pwee-pwee whistles at me if I were wasting my time with unproductive activities that didn't scare up mice. Admittedly, their wheedling sometimes worked, and I would break from whatever I was doing to nudge a nearby brush pile in hopes of mollification. Giving in to whining and sniveling is not good parenting protocol, as I should have known. Overindulgence only reinforces bad behavior; I was spoiling them. No wonder mom had left them with me and observed from afar. At one point, while I was gathering large sticks and piling them up for later disposal, Frick flew in, landed on my grapple bucket, and looked me in the eye. He looked frustrated that I was going about this whole operation backwards. Piling branches up, not tearing piles apart – it made no sense, we'd never find mice that way. I got the sense that these young birds were sure that my job was working for them and, being adolescents, were convinced I was incompetent. Okay, so I know I'm being anthropomorphic, but I've dealt with adolescents before, and this attitude looked familiar.

Over the past several work seasons, I've watch Frick, Frack, and their mother make dozens of kills, most of them within twenty feet of my location. I haven't always just been a bystander, not a detached observer without opinion about outcomes. Mostly I rooted for the young birds as they developed the skills they would need to earn their red tails. I felt some pride for their success and a weird sense of having a relationship with these birds. It has also occurred to me that many things died in this process and I have some responsibility for that. I can live with that, but if there is such a thing as karmic debt

⁵The red-tailed hawk is probably our most numerous and certainly our most familiar large hawk in Minnesota. They are commonly seen perched on wires, fences, and trees along our highways, hunting the grassy roadside ditches. Soaring, they are often easily identified by their tails as they dip or make a sweeping turn. In ornithologist Dr. Thomas S. Roberts' historic work, *The Birds of Minnesota*, he laments the persecution of this bird by "hawk hunters," and described a thousand-mile drive around the state in 1928, when only twenty of these birds were seen. My wife, Ann, and I counted 22 of them on a fifty-minute freeway drive from Northfield to St. Paul. These numbers represent a dramatic comeback for this beautiful raptor.

and reincarnation, I am so screwed. I'll be back as a meadow vole, and when the red-tail gets me, I'm heading straight to vole hell on roller skates.

Postscript:

I wrote this piece over this past winter, and have been working in recent days on the same field where I first met Frick and Frack last year. The brush piles are gone, having been hauled away late last summer, and replaced by debris piles composed of dirt, vegetation, and sticks raked together with an ugly comb like apparatus attached to the front end of the Bobcat skid loader. They have been composting for nearly a year, and so it was time to spread the piles to start preparing the field for planting. The piles are 5 to 7 feet high and the now fertile soil is covered with weeds like giant Chia pets.

I had been working for only an hour when a pair of hawks showed up. It turns out the dirt piles are a small mammal gold mine. A mature female appeared first, swooping in from the left side and deftly catching a deer mouse I had rudely roused from its daytime slumber. She sat on the pile I was working on and calmly ate the mouse while I sat in the skid steer and watched from no more than ten feet away. It was a mature red tail and her insouciance made me wonder if it was Frack, back and sporting adult tail feathers. As I watched I noticed a second hawk in a nearby tree, looking on with great interest, but not showing any inclination to join in. If this was Frack who caught the mouse, the other bird might be her new and skeptical mate. The more I watched her, the more I was convinced it was the adult female from last year and not Frack. The markings were not right, and Frack was probably trying to set up her own territory elsewhere. After finishing her meal she hopped down off the pile and spread her wings and tail and lowered her body to the ground in an "anting" posture.⁶ This was curious behavior after her meal, and I puzzled over what it meant. When she had done this for several minutes, she stood up and preened her feathers very deliberately before she left. I had seen her do this on a previous occasion last year, and thought it was strange at the time, but now noticing the presence of the second bird, I wondered if this behavior was for the express purpose of demonstrating her nonchalance and lack of fear to the other hawk. I can't recall if I was aware of a second bird being present the first time, but now I think it likely. Trying to understand her motive is fraught with anthropomorphic pit falls, but I couldn't help thinking she was demonstrating to her companion that this was a hazard free activity. Two weeks later, to my great delight, she brought her two new fledglings to the work site and the training began anew.

Recently, my wife Ann and I took a walk on the cross-country trail adjoining the work site, and one of the young hawks flew to a nearby tree and landed. I whistled to it and it flew to a branch of a tree directly above our heads. It would be nice to think it recognized me without my skid loader, but who knows?

I've named the two new trainees Flip and Flap.

⁶Anting is a behavior that involves using the formic acid produced by ants as a grooming product, presumably to control or inhibit parasites. There are two forms of this activity that have been described: active anting and, passive anting. Active anting is done by actually anointing the feathers and perhaps skin, with crushed ants held in the beak. In passive anting, a bird will prostrate itself over an ant colony and spreading and erecting its feathers to allow the ants to crawl over their bodies and anoint the feathers as they pass. Anti bacterial and anti fungal properties have been suggested for the use of formic acid in this way, but studies using concentrations emitted by the ants have not been shown to be effective for this purpose. Control of feather mites seems a more likely hypothesis, but as of yet, is still unproven. Regardless, over two hundred species of birds have been observed using anting as a self-medicating behavior.