

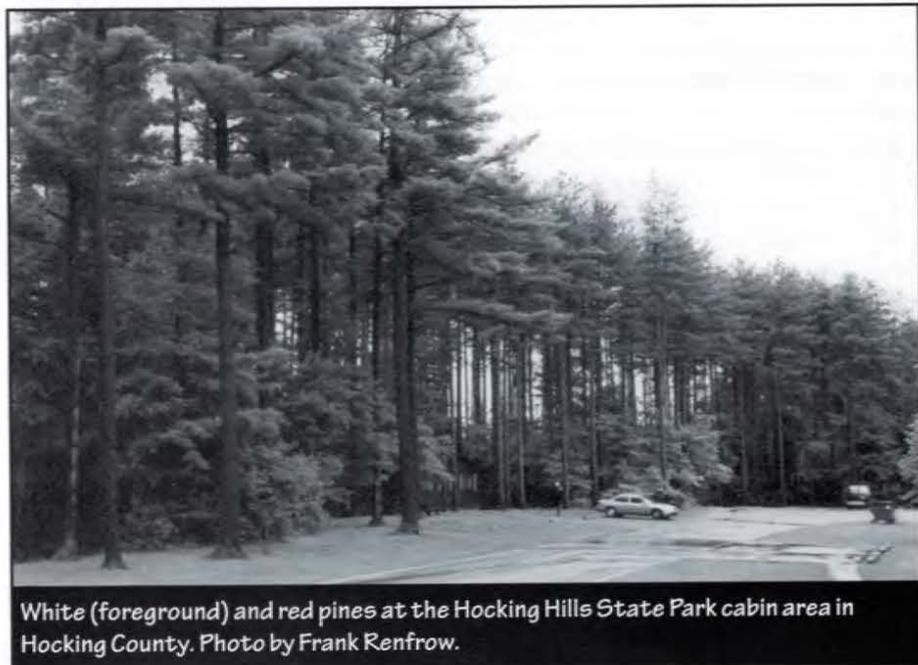
Hocking Hills 2001 - A Pine Woods Odyssey: Red-breasted Nuthatch Fledging Details and Other Records

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Old Man's Cave, Conkle's Hollow, Cedar Falls—to many Ohioans these names conjure up images of cool gorges of eastern hemlock *Tsuga canadensis*, bubbling waterfalls, and spectacular rock formations. The Ohio bird enthusiast visits these areas to find such hemlock cove dwellers as the blue-headed vireo *Vireo solitarius*, black-throated green warbler *Dendroica virens*, and hermit thrush *Catharus guttatus* (Randle 1989, Renfrow 1998).

But there is another habitat of avian significance unique to this area. The Hocking Hills area contains a remarkable variety of trees of the genus *Pinus*. Native Virginia *P. virginiana* and pitch pines *P. rigida* are scattered through the upper slopes and ridges. During the 1930s, plantations of white *P. strobus* and red pines *P. resinosa* were begun, and after 70 years of growth they now impose a significant presence on the Hocking Hills landscape. There are also some stands of planted shortleaf pine *P. echinata*, and this stately southern yellow pine is indigenous to Hocking County as well (Braun 1961). Some of the pitch pines may also be of Forest Service origin (Vannorsdall 1958).



White (foreground) and red pines at the Hocking Hills State Park cabin area in Hocking County. Photo by Frank Renfrow.

A pair of red-breasted nuthatches *Sitta canadensis* nested in a red pine in front of one of the state park cabins near Old Man's Cave in 1999 (Renfrow 1999). Upon arriving at the cabins on 30 May 2001, my wife Veronica and I found a pair nesting in the very same nest hole. We promptly reserved the cabin, and after several days of observation fledging was at hand.

I was out of the cabin at 6:00 a.m. on 4 June, 13 minutes before sunrise, but not early enough to catch the red-breasted nuthatches sleeping. The dutiful parents were already flying back and forth to the nest hole with choice bits of food for the rapidly growing nestlings. Just nine hours previous, I had watched the female return to the hole precisely at sunset—8:55 p.m.—to roost with her brood. This was after a full 15-hour day of coming and going with food at average intervals of 2 minutes, in alternation with the male. The young were now to the point of sticking their heads out of the hole, and noisily communicating in the mysterious language of the female nuthatch (more on this later).

Suddenly a blue jay *Cyanocitta cristata* landed on an adjacent pine. The male nuthatch gave a loud tremolo alarm call. The jay quickly departed. A nestling now took up the call from inside the hole. A loud, resonant "nya, nya, nya" began. A white-breasted nuthatch *Sitta carolinensis* picked up on the agitation, and called in the distance "ra, ra, ra." The female red-breasted approached, calling out "pit-a-pit, pit, pit...pit-a-pit, pit." An incredible variety of nuthatch sounds filled the air, then all became calm.

At 7:33 a.m., a nestling stuck its head out of the hole. After several days of cool temperatures and rain, the sun was finally shining bright in a clear blue sky. The nestling seemed emboldened by the change of weather. Soon it was halfway out,



Shortleaf pines at the Hocking Hills State Park cabin area in Hocking County. Photo by Frank Renfrow.

turning its head from side to side. A few seconds later it was off, fluttering awkwardly to a red pine some 20 feet distant. Soon three more nestlings followed suit, losing altitude on their first flight, but quickly climbing up the flaky bark to regain position on the safety of a higher branch.

The blue jay returned, this time with its mate. The red-breasted nuthatch pair quickly took up the alarm and, soon joined by a pine warbler *Dendroica pinus*, they drove the jays away. But one of the jays dropped a bit of white fluff on the pine needle-covered earth. Veronica has joined in watching the drama. "Is it a feather from one of the fledglings?" she asked with alarm. I examine the fluff, and find it to be just one of the many tent caterpillar *Malacosoma americanum* cocoons I had previously noticed clinging to the furrowed trunks of the red pines.



Red-breasted nuthatch nestling in red pine nest hole at Hocking Hills State Park, Hocking County. This photo was taken on 3 June 2001, one day prior to fledging. Photo by Frank Renfrow.

All four fledglings were soon heard in the tops of the shortleaf pines behind the cabins. They began a monotonous tree frog-like chant, "wok, wok, wok, wok," a four-noted begging call which continued off and on through the next several hours. Within a half-hour after the fledging, the young were flying across the road, now maintaining their height at treetop level. The fledglings seemed to have a strong instinctive sense of caution, frequently fleeing to another branch as an adult approached with food. The parent bird dutifully followed its skittish offspring, who would eagerly accept the food on the second try. By midday the activity had subsided. We left to survey some other parts of the Hocking Hills.

Just the day before the fledging of the nuthatches, I had checked behind the Old Man's Cave picnic shelter for the pine siskin *Carduelis pinus* I had seen on 31 May feeding a fledgling brown-headed cowbird *Molothrus ater*. Sure enough, there was the cowbird still in the very same hemlock by the edge of the gorge. After a half-hour vigil watching the resting fledgling, the pair of siskins suddenly flew down and fed their oversized ward.

Now I gave thought to the origins of the siskin nesting, which probably took place in one of the seven (!) species of pines, just across the road in the Old Man's Cave picnic area. Austrian *Pinus nigra*, Scots *P. sylvestris*, pitch, shortleaf, Virginia, white, and red pines grace this very special parcel of Hocking Hills soil. No wonder a red-cockaded woodpecker *Picoides borealis* chose to tarry here back in 1975.

Red-breasted nuthatches, pine, Blackburnian *Dendroica fusca* and yellow-throated warblers *D. dominica* are no strangers to these hallowed grounds. Surely a pair of pine siskins might also find this very special pinewoods to their liking.

The next morning I heard the male red-breasted nuthatch calling from the cluster of large white pines near the far end of the cabin area. At least two or three fledglings were chanting in their begging monotone. The male crossed the road and began calling from a dead snag. A pine warbler quickly chased him off his perch, but the nuthatch was soon back on the snag and calling again. He seemed to be urging the young nuthatches back to the red pines near the nest tree, and soon they followed him back across the road.

Later I found two fledglings in an area of young second-growth pine and deciduous trees, the realm of a singing prairie warbler *Dendroica discolor*. The fledglings appeared fresh and bright in the sparse foliage of a tent caterpillar-ravaged black cherry *Prunus serotina*. The adult male also appeared brighter; gone was the dirty tinge he had acquired from going in and out of the sap-encrusted nest hole. The family was all brightness and cheer, basking in the midmorning sun, and I realized that both of these fledglings were males, with bold black crowns.

I then heard the piping voice of the red-breasted female. Following the sound, I found the female back in the red pines, with a female fledgling also pitter-pattering in soft conversational tones. While watching the nest during the four days prior to fledging, I noticed that only the female partook in these piping vocalizations, which sounded strikingly similar to the some of the calls of the brown-headed nuthatch *Sitta pusilla*. "Pipa, wicky, pip, pip-a-wick-a-wick" is how I had noted the female's call just a few days before.

It had been on June the third, just a day prior to fledging, that I noticed answering "pip-a-wicks" coming from at least one of the nestlings. Is this a "language" that only the female red-breasted nuthatches learn? If so, does the family split into two gender-distinct groups after fledging? This certainly seemed to be the case in this instance. As I became engrossed in contemplating these issues, the voices of the nuthatches faded as they moved deeper into the pines.



Red-breasted nuthatch fledgling at Hocking Hills State Park, Hocking County. This photo was taken on 5 June 2001, one day after fledging. Photo by Frank Renfrow.

I soon found the nuthatches back in the white pines. As I was watching the male red-breasted nuthatch in the top of a pine, a female Blackburnian warbler boldly chased him out of the tree. She soon returned, and promptly settled into a compact cup-shaped nest located just a few feet from where the nuthatch had been feeding. The nest was 58 feet up, about 3 feet from the end of a 10-foot horizontal branch of a large white pine, located directly in front of one of the cabins. I had been hearing the male Blackburnian singing nearby for the past couple of days, and he was singing now, just a few white pines away. The female sat on the nest for 20-30 minute intervals, leaving to feed nearby for 5-10 minutes at a time.

The next morning I observed the male Blackburnian standing over the female in the nest, apparently feeding her. That day we spent that afternoon at Clear Creek, but not before finding another male Blackburnian warbler singing from the tall white pines along the rim at Conkle's Hollow.

Upon our return to the cabin area at dusk, we heard the male red-breasted nuthatch calling repeatedly from the dead snag tree. I followed him into the dense pines behind the cabins. Veronica stayed by the road, and it was lucky that she did. As I was peering up into the pine needles, she followed the male, who in turn was followed by a fledgling, right back to the red pine nest tree. They both fluttered around the nest hole, and then the male perched in a nearby shortleaf pine and called out with an incessant "wah-wah-wah-wah" for a full five minutes, as if calling the family home. At exactly 8:58 p.m. he disappeared behind a red pine adjacent to the nest tree; it contained several large cavities, and I suspect this was where he retired for the night.

This was our last night at the cabin. The next morning the female Blackburnian was still upon the nest as her mate sang his insect-like song nearby. I could still hear the four-noted begging calls of the fledgling nuthatches as we packed our things and locked up the cabin.

We bid adieu to Hocking Hills,
And all its fragrant pines.
White and red, shortleaf, and pitch,
Each differing in design.
Bark and cone and needle thin,
Here's to the pines of Hocking Hills
And the birds that nest therein.

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Media Review

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Flight Calls of Migratory Birds: Eastern North American Land Birds.

William R. Evans and Michael O'Brien. 2002. Old Bird Inc. Multimedia CD-ROM. Audio recordings, spectrographic portrayals, and text information throughout. Slim, folding cardboard CD case. \$35, plus \$5 shipping from Old Bird, 605 W. State St. Ithaca, NY 14850. Online ordering is available at <www.oldbird.org> or contact <admin@oldbird.org> for more information.

Knowledge of flight calls separates many excellent birders from a smaller set of elite birders. While many a fine birder can distinguish the nocturnal calls of migrating *Catharus* thrushes, fewer can decipher the zeep complexes attributed to sparrows and wood-warblers. But who has time to stake out each species and learn to recognize seldom-heard flight calls? Michael O'Brien and Bill Evans, two among the elite set, had time. In fact, they have made it their business to record and describe these calls. Their long-anticipated release, a multimedia CD-ROM reference guide, breaks new ground in what promises to be an ever-expanding availability of information. It describes the flight calls (diurnal and nocturnal) of 211 species of landbirds that migrate through the eastern United States. Most of them ply the night skies over Ohio every spring and fall.

The CD-ROM is currently available in an html version that requires navigation using one's Internet browser and works on the widest variety of operating systems. The true CD-ROM version, due for release later this year, will cost the same and be slightly more user friendly, requiring only that one insert the CD and wait for an interactive menu to open. Researchers may be more interested in the html version, which allows access to the .wav files and the ability to create spectrograms. Minimum system requirements are an Internet browser (Netscape or Explorer), 32 MB RAM and a CD drive. Yes, that's all. Just about anyone with a computer should be able to enjoy this version. The graphics are minimal; backgrounds are pleasant, transparent "wallpapers" of O'Brien's creation.

The instructions for use are simple and clear. One should begin by referring to the Read Me file. This file explains how to open and run the CD-ROM. The authors make a few good suggestions here. Although the browsers have a default media player, they recommend PC users download Winamp, and Mac users the most recent version of Quick Time. Have the player open before accessing the sound files; otherwise the browser will open and close the player each time one selects a file, which slows down playback and browsing. Another useful suggestion is to run the player in the background (invisibly), accomplished by right clicking the player and selecting the proper visualization modes. It took me just a little time to figure out how to do this with Winamp. It was time well spent.