





Spring Birds

An Audiophile
Recording Experience
from Doug Fearn

This recording was made in May of 2020 in Chester County, Pennsylvania.

I had been thinking about recording the remarkably diverse birds in our area for some time. In addition to dozens of species who are here year-round, there are also many migratory birds that pass through in spring and fall.

One problem is that despite being 25 miles west of Philadelphia, in a rural area, there is still a lot of man-made noise that would make a recording like this impossible. The location is on the flight path for airliners leaving Philadelphia for points west. There is not much traffic on the roads, but still there are not many periods of time when traffic is inaudible. Even trucks several miles away, or farm equipment a farm away, can be heard.

When the Covid pandemic struck in March of 2020, I thought it could present an opportunity to record the birds with minimal interfering sound.

I've been recording since 1968, almost entirely music for records. I applied some of my favorite recording techniques learned from decades of studio and location recording to making this recording.

I needed a day or two when the weather cooperated. There could be no rain and there could be no wind.

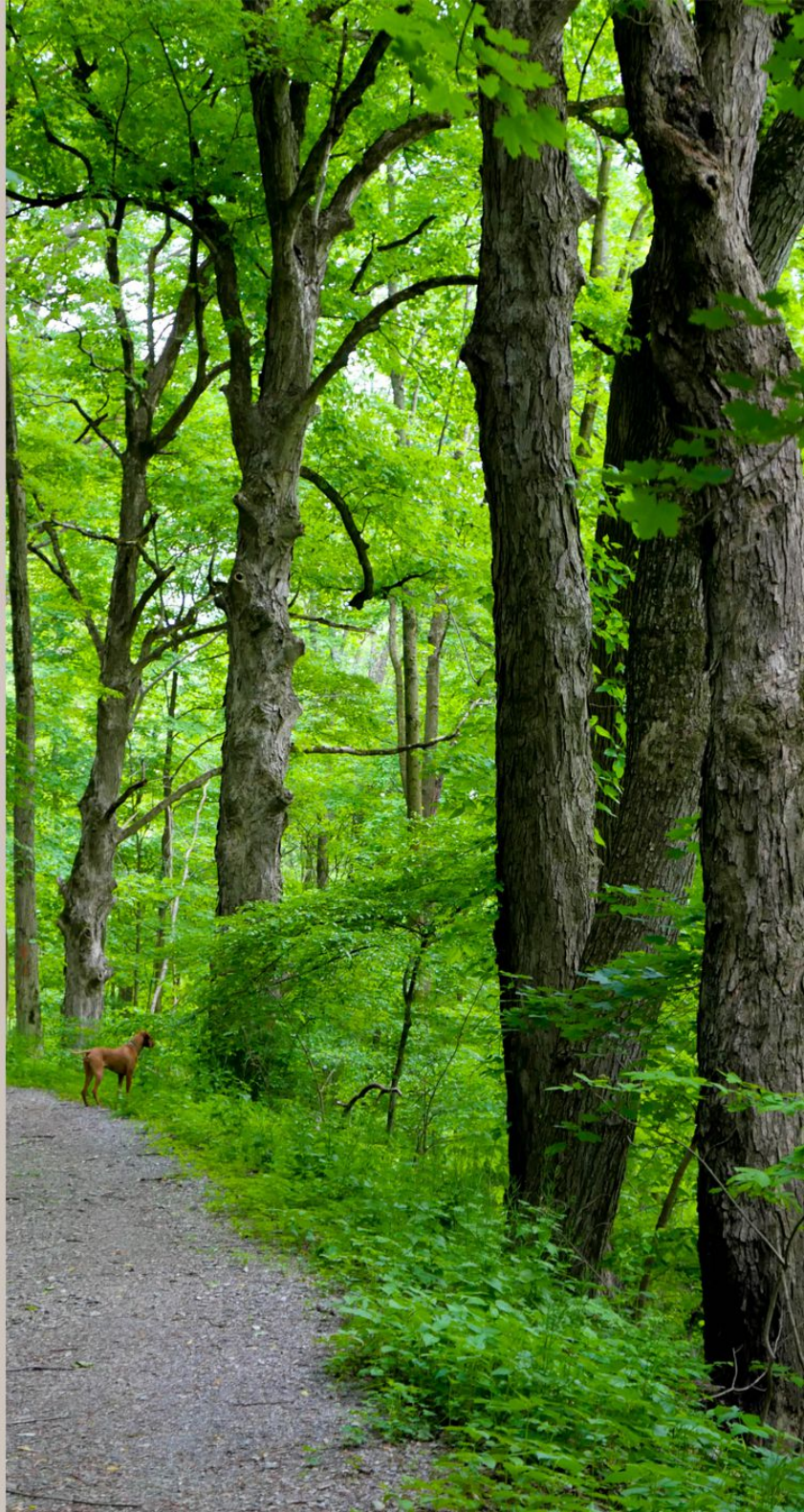
I chose a Neumann SM69 stereo condenser microphone from my collection, which I thought would be the best choice. I might have used a ribbon microphone for this purpose, but they are very sensitive to air movement, and even a slight breeze can destroy the delicate ribbon. The SM69 was more robust, and it sounds excellent.

I used the Blumlein configuration of crossed bi-directional elements, which is my favorite stereo recording technique.

On a day that looked promising, I got to the studio at 4AM and ran microphone lines outside to a level part of the land that would be in the center of the bird activity. The mics were about 200 feet from the control room. The SM69 was on a small boom stand, about six feet above the ground.

Those mic lines went to a D.W. Fearn VT-2 vacuum tube microphone preamplifier. The VT-2 is a product my company makes and is used in major studios around the world. After the mic preamp, the stereo signal went to a D.W. Fearn VT-5 stereo equalizer, where I rolled off some of the lowest frequencies, below about 40Hz, and a bit of highs at 28kHz. The birds had significant ultrasonic energy in their songs and the gentle roll-off minimized aliasing effects if the recording were to be reduced to the CD digital audio standard.

The analog-to-digital converter was a Merging Technologies Hapi. The recording was made in DSD256, at a 11.2MHz sample rate. DSD was the logical choice for this recording due to its pristine rendering of the sound.





The recording software was Merging Technologies Pyramix digital audio workstation, which is what I use for all music recording. The digital audio was recorded to a computer hard drive.

Monitoring was through PMC twotwo.6 studio monitor speakers, and with BeyerDynamic T1 headphones.

The recording went from about 4:30AM until around 7AM on two successive days.

That five hours of recording was edited in the DSD format down to just under an hour. Editing was necessary to delete some noise from barking dogs and mooing cows, very far away, but still audible, and the passage of a medical helicopter. I also had to edit out a short stretch when a bird landed on the boom of the microphone stand and screeched about a foot or less from the microphone. It sounded very dramatic, but out of place.

I also made some edits to eliminate a long stretch of a particularly raucous bird that would have otherwise been annoying. I left some of it in but cut out the bulk of that section.

Otherwise, this recording is exactly as it was captured those mornings. I was amazed at the sheer number of different birds that can be heard. There is also a fox that made an appearance. A list of the birds could be made by someone with more knowledge than I have, but I think it is best left up to the listener to discover as they listen. In addition to the songbirds, you might pick out a couple of wild turkeys, red-tailed hawks, and distant Canadian geese flying in formation.

The final edited version is made available as a DSD download, so those with the appropriate equipment can listen to a bit-for-bit copy of the original recording. It has also been converted to a high-resolution PCM (.wav) file, a format for streaming on Apple Music.

This recording was a lot of fun to create. It captures what you would have heard that morning, just as if you had been there to hear it in person.

The Recording Equipment



Neumann SM69
Stereo Condenser Microphone



D.W. Fearn VT-2
Vacuum Tube Microphone Preamplifier



D.W. Fearn VT-5
Vacuum Tube Stereo Equalizer



Front Cover and liner notes
photos taken at the recording
location

DWFearn.com
OuterMarkerRecords.com
Doug Fearn Podcast:
www.buzzsprout.com/942952

