

Scary River

Maybe That's Our Fate...

Goals and Artistic Vision

The Scary River project began out of the union of composer and performer. Early this semester, James Wolff (Singer, Violins, Piano, Poly Evolver, Song writer) asked me to play his Clarinet Sonata "Floating Particles". I have known him since my freshman year, but a couple of years ago, he seemingly disappeared. I asked him where he was during that time, and was rewarded with the news that he recorded with a band in New York City, and was currently working on a new, currently unnamed, project. He talked to his band, and all readily agreed to join me on this project.

I began attending band practices to get a feel for the band. Through the course of weeks of late nights and a small, deafening (ear plugs not optional), and smoke filled room, I came away with an intimate knowledge of their music, and a course of action for the recording. The Band consists of James Wolff singing and playing a myriad of instruments (listed above), Kenny Sanders on drums (Kick, Snare, 3 Toms, 3 Cymbals, and Hi-Hat), Adam Scanlon on guitar, and Dave Underhill playing the Nord and Roland Fantom keyboards (Bass and percussive effects mostly).

The musical writing was timbrally driven rather than chordal, using only a few chords and key areas. I quickly realized the sheer size of the ensemble they were trying to create in their songs, and my key goal in the mix was to provide some transparency with such thick orchestration. The dominant instrument is constantly shifting, and every instrument audible while playing. My second concern was that in rehearsal, the three songs they would play for this project sounded very similar, because the non-standard instruments are used so frequently. Though the addition of string parts alleviated some of the problem, more was needed. The band provided me a surprising amount of artistic license, and I ran with it, carving the constantly playing instruments into their final shape. Unnecessary lines were cut, and the overall feel of some parts was changed, sometimes drastically. The ending of Hurricane Machine, for example, went from a drum, guitar, and keyboard dominated power wind down, to a piano and string section feature, with the other instruments dropping out entirely. It was this process that brought some real individuality to the three tracks, while maintaining the cohesion of the album.

Finally, the project was to be named. When we began the process, the new band called themselves Sugar Glider, and the album Neon Guns. By the time we listened to each of the songs 30 or 40 times, though, we noticed a common thread through them all. The first song, Hurricane Machine, tells the fate of a doomed planet, caused by the neglect of man. The second, Ghost, is the story of a man who begins hearing spirits in his home, and goes crazy trying to rid his room of them. Implied in the song is the cyclical idea that he may become the next permanent resident, driving the new occupant to a similar fate. The third, Patterns of Light, is an uplifting song, which speaks of seeing fate through light, finding the good path, and avoiding the trouble of the previous tracks. We took the phrase "Maybe that's our fate" from the song Hurricane Machine to title the album, and the band name changed to better fit the music.

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Technique and Tracking

Equipment

- Millennia 8 channel microphone pre-amplifier (Used unless otherwise noted)
- Microphones
 - Drum kit
 - Kick: Yamaha SubKick and AKG Solid Tube (Oxford Pre)
 - Snare: Sennheiser MD 441
 - Hi-Hat: Neumann KM-143
 - Toms: 3 x Neumann KM-84
 - Overhead Left: Coles 4038
 - Overhead Center: Royer R-121
 - Overhead Right: Coles 4038
 - Guitar
 - Direct in through amplifier
 - Neumann M-150 (Oxford Pre)
 - Neumann U-87 (Oxford Pre)
 - Strings
 - Direct in for electric violin
 - Neumann M-149 (Omni) for acoustic Violin and Cello (Oxford Pre)
 - Piano
 - Inside: 2 x Microtech Gefell M296
 - In room: 2 x Neumann M-150
 - Nord and Fantom
 - Direct in through Manley Pre-amp
 - AKG Solid Tube and Microtech Gefell M930 on amp (Oxford Pre)
 - Voice
 - Neumann M-149 (Oxford Pre)
- Pro-Tools multitrack with CD Backup
- Sony Oxford Mixing Console

Technique

Due to the extremely thick texture the band is after, I decided to track each instrument individually to avoid any potential bleed problems in the mixing stage. The first tracking session began with drums. I was assisted by Daniel Zink for this first session. Each drum/cymbal is miked individually and closely.

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- The kick drum used two microphones, the SubKick chosen for its low end extension, and the SolidTube for its very desirable sonic characteristics for this particular use.
- The Tom microphones were all positioned within inches of the drum head, just over the rim. KM-84s were chosen for the Toms for two reasons. The fact that I wanted matching cardioids to limit coloration and bleed limited my choices drastically, with the KM-84s winning out for their mid to high end boost. I felt that by emphasizing the higher overtones of the Toms during tracking would help me avoid the muddy and vague sound that many times plagues the Toms.
- The hi-hat microphone was positioned approximately 7" from the outer edge of the cymbal, on the far side from the drummer. The KM-143 has become my go-to microphone for Hi-Hat due to its very detailed highs, capable accurately recreating the instruments sizzle.
- The overhead microphones were placed roughly a foot above the cymbals, halfway to the edge on the outside of the set. Ribbons have long been my microphones of choice for cymbals, because while they offer plenty of high end sizzle, they do tend to smooth out the sound a little, making it easier to blend with the lower instruments. Ideally, I would have used 3 Coles microphones, but the studio only owns two, so a Royer was substituted for the center cymbal.
- The Snare microphone was positioned 1.5" outside the rim, to allow both sound from the top head and the snares to be recorded. The MD-441 is a natural choice for snare because of its ability to cope with such high sound pressure levels without distortion.

I much prefer the Millennia pre-amplifier to the Oxford for timbral reasons. The Oxford tends to color the sound ever so slightly, especially when providing phantom power, making alarms go off in my head that it's a recording, rather than live, while the Millennia is completely transparent to me. The kick microphones were run through the Oxford amps due to a lack of channels on the Millennia. The timbral differences could not be discerned on these tracks once they were cleaned up in EQ.

To give the drummer a better chance at a great performance, I set James up in the hallway outside the control room with an ElectroVoice RE-20 and a direct in from the Poly Evolver to record scratch tracks, and provide Kenny with something in his headphones.

Each of the keyboards (Nord, Fantom, and Poly Evolver) was initially recorded directly into Pro-Tools through the Manley pre-amplifier. As needed for the tracks, they were played through the small Roland guitar amplifier and recorded using the AKG SolidTube or Microtech Gefell M930, depending on what sound I was looking for. Because the amplifiers rattle the ceiling tiles even at moderately low volumes, an enclosure was constructed using 4 short gobos as the walls, with two more to form the roof. Finally, a blanket was laid across the entire assembly.

I took a direct out from the guitar's amp, as well as miking the amplifier with an M-150 and a U-87. The M-150 track is only used on Ghost, as it muddied up the lower mid frequencies on the other two songs.

The acoustic string instruments were all closely miked using an M-149 set to Omni to give them that warm, yet open sound the Neumann M tube series is famous for. The room was also dampened

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during this stage with a plethora of gobos, kindly set up by Geoff Knorr and Dmitriy Krasny, eliminating all but the vertical reflections in the room.

Knowing that I would want a more classical feel to the end of Hurricane Machine with string and piano accompaniment, I miked it more as if I were recording a classical session than rock. The MG-296s were placed inside as spots, while the bulk of the sound comes from the M-150s, about 9 feet outside the lid.

Finally, the voice was miked with the M-149 set to cardioid to exploit the proximity effect, and add body to the single voice. This was also in the highly deadened room.

The trend on all of these points towards tubes, and it does so for good reason. The Millennia was only used in that first session, with subsequent sessions amplified through the Oxford. Because the timbral problem is only noticeable when the oxford is providing phantom power, tube microphones were the workaround for that problem.

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Mixing and Editing

Even after meticulously carving and cleaning the individual tracks, my mixes seemed to be missing something; they seemed to be cluttered and dirty despite my efforts against this. The problem is that with so many instruments, and a main singer who play so many of them, the performances themselves were not particularly clean, so I set about on the excruciating process of time aligning each track. The keyboards were the most difficult, as the notes didn't so much as start at any one point, but crescendoed to full volume, so the timing was tricky. This was also the point when I listened to the pacing of each song, and tried to make cuts to individual instruments to create a constant movement in the mix, while not sacrificing clarity. The editing process took roughly 15 hours and took place in 220 as well as 2002.

Once the tracks were edited, the mixing came relatively quickly. I cleaned up the tracks with the following processing on the Oxford:

- Kick: Low pass filter and notch for the snare.
- Snare: Band pass filter, boost fundamental, and gate
- Hi-Hat: High pass filter and notch for snare
- Toms: Low pass filter, notch for snare, boost fundamental, and gate
- Cymbals: High pass filter, snare notch (if low enough)
- Hi-Hat: Low Pass filter, notch for snare
- Voice: Mid/low notch boost with wide Q to thicken voice, AutoTune
- Piano: Lined up tracks in Pro-Tools to avoid filtering
- Electric strings: Mid boost to make sound more natural
- Strings: Chorusing in Pro-Tools to make sound like full section, AutoTune
- The keyboards were not EQed, timbre was realized through the amplifier.

I used a touch more reverb than is typical for rock recordings, with a 1 second plate (TC6000) for the drums, 2 second hall for the strings, piano, and voice, and various ReVibe settings for the keyboards.

To compensate for the shortcomings of the studio, as well as increase clarity in the mix, there as a wide 3dB dip centered at 215 Hz, and a slight boost in the vocal range on the main channel.

Because of the sheer number of tracks used (10 drums, 2 voice, 3 lead guitar, 3 rhythm guitar, 8 strings, 4 piano, 3 Nord, 3 Fantom, 4 Poly Evolver, 4 effects), a hybrid mixing approach was used. A single fader was assigned to each drum (9 total), and pairs of faders for each other instrument or group. These pairs were panned hard left and right, with the individual tracks panned and balanced in Pro-Tools. This allowed me to both physically mix the tracks live, as well as use the powerful Pro-Tools automation to help. Mixing took roughly 20 hours, and was done entirely in 220. It was monitored primarily on Sennheiser HD-580 headphones, with the Right Hemispheres and DynAudios used

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frequently for reference. The mixes were also listened to on many other systems including my car, my computer speakers (Logitech Z-560), and my home theater (Polk Audio setup) to assure they would transfer well. I also enlisted the help of anyone I could at my company (Big Huge Games) to give a listen and let me know what they thought.

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Project CD

Hurricane Machine

Ghost

Patterns of Light

James Wolff

Kenny Sanders

Dave Underhill

Adam Scanlon

With Geoff Knorr

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Recorded, produced, mixed by Joe Dombrowski