

## Foley Recording

By Blair Jackson

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### FILM SOUND'S MISUNDERSTOOD ART

One of the most critical, yet underappreciated links of the film sound chain is Foley recording. You probably know the basics. It was named after the great Universal Studios sound man Jack Foley (see “You Don’t Know Jack!” sidebar on page 54) and covers an incredibly wide range of sounds that are added in post-production: everything from car door slams to footsteps, to garment rustles, to jingling keys, sloshing water, furniture moving, sword hits; you name it. Basically, Foley is everything that isn’t covered by sound effects or through the production track. Occasionally, the Foley department will also supply the base sound materials for effects editors.

And though the work may seem simple as compared to, say, recording the sounds of Sherman tank treads on location (an effects task), it’s actually a very demanding and precise job that, when done well, adds immeasurably to the success of a film’s soundtrack. Recently, Mix spoke with three of the best Foley artists in the business to get a sense of the demands and peculiarities of this important craft.



**Foley artist Marnie Moore at Berkeley, Calif.’s Fantasy Studios**  
**photo: steve meruda**

supervising sound editors who gave me a lot of on-the-job training — Gordon Ecker Jr. being one and Chuck Campbell the other. They would be on the stage with me all the time, directing, if you will: ‘Can you give me a little more scuff here?’ ‘Can you try that again but with a lighter touch?’ And by osmosis and by doing it, I got better.”

Originally from Radnor, Penn., John Roesch started out in acting but later got into filmmaking, even sharing a prize with some colleagues at the San Diego Film Festival in 1976. Stints at NYU Film School and the American Film Institute followed, “but after a while, I realized I didn’t really dig directing,” he says. “Then one day, I got a call from somebody to work on sound for a film, just to help out. It turns out I was the only guy who had sneakers on and they needed some Foley...and the rest is history!” he says with a laugh. “I was lucky enough to work with some really talented

Roesch has been working in the business for the past 25 years — the last 12 at Warner Bros. Studios' facilities at The Lot in Hollywood — and in this time, he has been one of the busiest Foley artists in L.A., working on close to 300 films in every genre, including *Poltergeist*, *Trading Places*, *Gremlins*, *Fatal Attraction*, *The Fugitive*, *Schindler's List*, *Braveheart*, *Pocahontas*, *Twister*, all three *Matrix* films, *8 Mile*, *Black Hawk Down*, *Blade: Trinity*, *Collateral* and *Starsky & Hutch*, to name a smattering.

Marnie Moore, an independent Foley artist living in the San Francisco Bay Area, began her sound career working as a music engineer in conventional recording studios; she spent eight years at Russian Hill Recording. There, she first worked on various film soundtracks and encountered the leading Foley walker in the area at the time, Dennie Thorpe. “I started helping her out and I liked the work so much that a year later, I left the music business and went to apprentice for her,” Moore says. “We did a lot of schlepping of props back and forth between Fantasy [Studios in Berkeley] and Skywalker [in Marin]. I worked with Dennie for about four-and-a-half years, and it was both scary and amazing because she was working on some really big films — the second film I ever worked on was *Indiana Jones and the Last Crusade* — so I was terrified.” Today, Moore usually works with fellow Foley artist Margie O'Malley.

Moore's credit list is also long and diverse, and includes such notable flicks as *Backdraft*, *Jurassic Park*, *Bugsy*, *The English Patient*, *The Sixth Sense*, *Boogie Nights*, *Rushmore*, *Lost in Translation* and the forthcoming Sam Mendes film, *Jarhead*, among many others.

In New York, C5 has been a leading sound editorial company for many years, attracting most of the top directors in the area. While the company's main offices are in Manhattan, its new Foley facility is across the Hudson in Northvale, N.J. There you'll find veteran Foley artist Marko Costanzo and his engineer of many years, George Lara. Both got their starts at Sound One in Manhattan, where they credit former owner Elisha Birnbaum as the person who got them into Foley. “He's the one who showed me how to bang two things together,” Costanzo says, chuckling, “but I also learned most from people like Skip Lievsay, Ron Bochar, Phil Stockton and Bruce Poss. I worked for every sound editor in New York and had all of them asking me for every quirky sound they could think of. My attitude always was, ‘Well, if that's what you want, we're going to figure out a way to get it.’”

Costanzo's staggering filmography includes more than 300 films during the past 21 years, including multiple titles from directors Woody Allen, Spike Lee, the Coen Brothers, Martin Scorsese, Barry Sonnenfeld and Ang Lee, and also such works as *The Silence of the Lambs*, *The Accused*, *Eight Men Out*, *Angels in America*, *Robots* and *Y Tu Mamá También*. His 2004 list alone will tire you out: *Eternal Sunshine of the Spotless Mind*, *Maria Full of Grace*, *The Ladykillers*, *Silver City*, *The Stepford Wives*, *The Manchurian Candidate*, *Vanity Fair*, *Closer* and *The Aviator*.

## **WHERE TO BEGIN?**

What kinds of traits are common to Foley artists? Certainly patience and an incredible attention to detail. “One of the most important qualities of a Foley artist is the ability to

focus in the here and now, kind of like a musician, because it's a performance in real time,” says Moore. “Obviously, you have to have very, very good hand-eye coordination. You also have to have that kind of personality, similar to a recording engineer's personality, where you can put up with a lot of crap with a smile on your face because there's a lot of pressure in the business and there are people with strong personalities, so you have to be as accommodating as you can manage to be.

“You also have to be observant about the world around you, enough to think, ‘Does that car door sound too heavy?’ ‘What is the sound of those boots scuffing through those leaves?’ You have to be someone who's paid attention to that kind of stuff. I've always been very interested in materials, and I'm also mechanically inclined, so I understand the relationship between size and weight. I've always been curious about what things are made of and what they might sound like.”



**C5's Marko Costanzo, pointing, and engineer George Lara**

A typical Foley stage usually comprises one or more “pits”: areas that can be quickly converted to different surfaces as a film requires — from cobblestone to hardwood, dirt to linoleum. Some studios have areas that can be filled with water for scenes that require splashing or walking through puddles or mud. Usually adjacent to the Foley stage is a warehouse or storage area housing every imaginable prop. Besides the obvious different shoes, boots, walking surfaces, fabrics, zippers, locks, clasps, etc., there are often many different car doors (for opening, closing, etc.), tools, weapons, common household objects — anything that makes noise. It is usually the Foley artists who track the inventory, which constantly grows because, one learns, Foley artists are inveterate collectors of *stuff*.

“My warehouse has been a work in progress over the 24 years I've been in the business,” Roesch says. “We get stuff from *everywhere*. There's no garage sale I don't like going by, and all the people who are associated with me — like my Foley partner Alyson Moore, mixer Mary Jo Lang and recordist Scott Morgan — if they see something unusual at a garage sale or on the street, they'll pick it up and bring it in. Basically, you can't have too much stuff, as long as there's a place to put it and you can keep track of it. You never know when the weirdest little thing is going to come in handy for a scene.”

“We're always looking for things that squeak or clank or make springy, sproingy noises,” notes Moore. “If you go to a swap meet or garage sale, you're always putting your ear up to things and listening. The weirdest thing is when you listen to things in the grocery store — tap on vegetables and rustle them and crunch them a little. I always try not to call too much attention to myself when I'm doing that. Dennie [Thorpe] once went to the grocery store and bought a bunch of fruit that was way past its prime and the cashier said,

‘You know, we have *much* better fruit than this. I really don't want you to buy it.’ And Dennie said, ‘But I really want the rotten fruit...I *need* it.’ I can't remember what film she was working on at the time.”

## ON THE STAGE

Warner's Hollywood Foley area — Stage F — was originally built in the mid-'70s, “and it's been updated a bit since then to give us a little more flexibility,” Roesch says. “It used to have a series of pits — this one for gravel, this one for sand — but awhile ago, we pulled out the dividers and made one super-pit. There are still areas I can walk to — a little more sand here or gravel there.”



**Behind the scenes at C5 Foley, where noisemakers and everyday objects are stored for future use.**

in place. After all, the actors [on screen] aren't walking in place, so the sound should move a little bit. Before, the engineer would make various adjustments to create that effect; now, it's more complementary between [the artist] and engineer.”

At the new C5 stage, which Costanzo describes as “a big rectangular room with an 18-foot ceiling,” there is a “dry side and a hot side, depending on what you're looking for. There's a main reflective wall, too, and, of course, we have all sorts of foam and cushions and other things that can affect the acoustics in the room.

“There have been a lot of changes in the way Foley is recorded through the years, and one of the trends is toward bigger pits,” he continues. “In the old days, you'd commonly have a bunch of three-by-three surfaces [for walking], but now with bigger spaces, there's not as much walking

Not surprisingly, the equipment that is used to capture Foley has also changed through the years — recording media more so than the microphones.

“Early on in my career,” Roesch says, “everything was done to mag, and if we wanted to get artsy, we'd fly something onto ¼-inch and speed it up or slow it down. Then the next step was 24-track recording. The film business is usually at least 10 years behind the regular recording business, so we didn't get to that point until about the mid-'80s. We used Dolby A mostly, then SR. The beauty of 24-track, of course, is that you had a lot more information available to hear back at one time versus mag, where you could maybe have 6-track. Then, in the early to mid-'90s, you're getting into digital audio workstations. We used a Fairlight for many, many years; in fact, my feeling is that until Pro Tools came out with HD, the Fairlight was a much better machine. But we switched to Pro Tools when HD came out.”

“It has been such a wonderful experience to go through the changes from mag through to digital,” echoes C5 engineer Lara. “[At Sound One] in 1986, we used two 6-track

magnetic recorders and a stripe recorder at the same time; the stripe recorder enabled us to bounce sounds and move them into sync with picture. In 1990, we moved to the Sony digital multitrack and that gave us 22 tracks instead of the 12 we had on the mag, so that was a step up. But we encountered the problem that we had a lot of ‘runaways’ [where the multitrack loses the timecode], so that created some problems.

“Then we started to explore different digital platforms like the [Doremi] DAWN, Sonic Solutions and Pro Tools. When we first got into Pro Tools [at C5], it was still very quirky because it seemed like it was based for music, not film at that time, and it used to take too much time for it to lock up to picture. In 1995, thanks to Akai, we were able to cross from analog to the digital domain, and we never looked back. Now, we use Pro Tools|HD, which is a great mixing, editing and recording platform.”



**Alyson Moore and John Roesch in the moment, in the Foley pit at Warner Bros.’ Studios The Lot**

continues. “With the two engineers we work with the most — Ben Conrad and Frank Rinella — one likes closer sounds better and the other likes more distance in the shot. It’s all a matter of taste. They’re both great engineers.”

Lara says that at C5, “We use different microphones for different types of things, but I mainly use the shotguns — the 81 Neumanns; I’m very happy with them. We use four of them. If Marko is on the exterior pit, we’ll have one mic [pair] on the pit and one on the other side of the room. So we’ll have two primary mics and two secondary mics, and then we also have another one mounted — the Schoeps stereo small-capsule [mic] — which gives us more ambience. By having all these mics mounted on both sides of the room, it makes it much easier to get different perspectives on-the-fly while recording. On some close-ups, where there’s also going to be a very detailed sound out front, I might use three different mics: left, center, right. I’ll make the two Neumanns a stereo pair, figure-8, and then use one of the Schoeps small-capsule for the center to get a fuller sound and record it on three tracks.”

And down at The Lot, Roesch and his colleagues are mostly using KMR 82 shotguns as close mics, with a Neumann U67 as a room mic. “The old thinking was to do everything pretty close-miked,” Roesch says. “Some people used to mike directly behind the [Foley

As for microphones, “I think we might do it a little differently in the Bay Area than in L.A. or New York,” Moore asserts. “For years and years, we’ve been using Klaus [Heyne] — modified Neumann U87s for almost everything. Both Fantasy and Skywalker have those mics, and I just love them. The preamp was modified so they’re much higher output, so we can record a tiny cloth that’s very quiet without getting too much noise.

“We often like to get two perspectives so we’ll use two mics: one close and one far away,” she

walker] — six inches to a foot! — because that was going to get ‘good signal.’ But what you really got was a huge bashing footstep that had no detail to it. But technology has changed that. Now, [the mic will] typically be between three and six feet away on a mic stand, in front and/or to the side, but only about 15 degrees or so. And, depending on how resonant the surface is, we might have it up on something that will decouple it from the surface it's sitting on.

“We'll use a lavalier mic from time to time — an ECM 50 — and that's for some unusual effects,” he continues. “We can put down a shooshy, zuzzy Duvatyne material and we can spin the mic with our hands on it in a circle and create the feeling of wind or even fire if you spin it a different way. We're definitely getting more creative all the time.”

### **EXPANDED FOLEY**

And this coincides with evolutionary changes in what exactly constitutes Foley. Roesch says that when he came into the business, “there was an old guard [of Foley artists] that said, ‘Okay, we'll do some footsteps here, some key jangle there, but we're not going to do a glass break, we're not going to do a body fall, we're not going to do some rain effect on a window.’ It was never considered that Foley could fill those holes; they came under the category of effects. I'm not being critical here, that's just the way things were.

“But around the time [*Star Wars* sound designer] Ben Burtt came along, things started to change in film sound. From that point forward, you had a loosening of the grip on rules. And there were some of us who didn't know there were limits to what Foley should do, and we did our own thing and had a lot of fun with it and, I guess, in the process helped expand the role of Foley a bit. Now, of course, it wouldn't be at all unusual for someone to request some rain pitter-pattering on a window.”



**Marnie Moore worked on Sam Mendes' upcoming film, *Jarhead*.**

Though much of the Foley stage's work continues to be representational audio, walkers are also increasingly called upon to contribute to sound effects — their sounds are often combined creatively by editors or, later, re-recording mixers. It's usually up to the supervising sound editor to make that call. “On *Schindler's List*, where the train was braking to a stop, [the effects editors] cut the sound of the couples and we did some of the squeals — this great steel-on-steel sound — on the Foley stage,” Roesch says. “We knew we were part and parcel of that.

“The amount of CGI in films has also affected us,” he adds. “Is it huge starships cruising by? Well, there's probably not much Foley there. But if it's stuff like *T2* or *T3* and you've got the robot liquefying and coming through a screen, that's a decision point: Should we do that in effects or as Foley? In the '80s going into the '90s, a lot of things moved from effects into Foley, and now the pendulum has swung back a little bit. Foley budgets are

smaller on some films now, and where we had 'x' days previous, you can lop off two to four now and you will not have as much done in Foley or as much Foley time, except for large-budget films.”

Moore agrees: “The amount of time was established a long time ago when we used to work with 1,000-foot reels, which were about 10 minutes long,” Moore says. “Generally, you would figure that for a full-coverage film, you have one day per 1,000-foot reel. That was pretty good, but unfortunately, we usually don't get that anymore. Now they have digital reels, which are like double reels basically, but they still think we should be able to do a reel in a day!”

Moore works on huge films but still contributes to lower-budget independent features. She says, “Not everyone has realistic expectations. If you're working on a low-budget movie with someone who's really experienced, that's the best situation because they know what they can and can't use and how much time it's going to take. We work as a team and figure out how to get the best sound possible for the smallest amount of money. But that's often not the case. You'll have people who aren't very experienced and they'll want you to do full-coverage Foley in five days on a feature-length film. They don't understand that Foley can be fairly slow and tedious. So then they start backpedaling and the quality usually suffers.”

Minor complaints aside, these Foley artists clearly love their jobs: They love the variety of the projects, the mental and physical discipline involved, the camaraderie of sound professionals up and down the line and the satisfaction of contributing to (hopefully) great art and/or entertainment.

“It's always changing,” says engineer Lara. “One day we're working on a Woody Allen film and maybe that's a ‘walkie-talkie’ with a lot of footsteps and ‘cup-downs’ — glasses and utensils and things like that — because he's always shooting in restaurants or at dinner tables. And then the next you're on *The Hulk* and it's a whole other set of challenges and things that are required. It's *never* dull.”

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*Blair Jackson is Mix's senior editor.*

## **YOU DON'T KNOW JACK**

His name is synonymous with film sound effects, and his moniker is occasionally joined descriptively with words such as “pit,” “stage,” “walker” and “editor.” But do you know who Jack Foley was? Not many people do.

Foley was born in Yorkville, N.Y., in 1891 and raised mostly in the Coney Island section of New York. He went to school with James Cagney and Bert Lahr, but after high school moved to California, working for a spell as a stuntman and a double in silent films before eventually settling in rural Bishop, which is located in the foothills of the Sierra, many miles northeast of Los Angeles. There, he raised his family and worked in a hardware store, while on the side writing film scripts. He also used his movie industry contacts to promote Bishop and the surrounding area as a great location for shooting Westerns and other films; this led to his being employed as a location scout. A little later, he held a number of odd jobs for Universal Studios in L.A., and it was while working at the studio's Stage 10 as a props assistant (among other things) that Foley got his first experience dabbling in the new medium known as “talkies.” *Showboat* was his initial triumph, and it immediately made him an in-demand soundman.



The first sound pictures concentrated on dialog and music, but there wasn't much attention paid to other sounds. Foley was not the first person to separately record footsteps and add them into a film — that was done by several directors using 78 rpm records of footsteps. But it was Foley's idea to have the film projected on a screen on a soundstage and then to record sounds synchronized to the actor's movements. He was also the first to pay attention to the differing qualities of footsteps on film — varying the surfaces he walked on, using different shoes, etc. — and mimicking the sound of rustling fabric and other effects.

“Jack's technique was to record all of the effects for a reel at one time,” commented director George Pal many years ago. “Jack added the footsteps, the movement, the sound of various props — all on one track. He used a cane as an adjunct to his own footsteps. With that one cane, he could make the footsteps of two or three people. He also kept a large cloth in his pocket that could be used to simulate movement.”

Part of what Foley brought to recording, too, was a certain attitude. As his colleague Joe Sikorsky once noted, “Jack emphasized that you have to act the scene. You have to *be* the actors and get into the spirit of the story the same as the actors did.”

Most of Foley's work through the years went uncredited — there was no title in those days for “Foley artist” — but he worked on many popular films during the years, from the original *Dracula* in 1931 to Stanley Kubrick's epic *Spartacus* in 1960. The latter film is the source of an oft-told tale of Foley's prowess. The story goes that Kubrick was unhappy with the sound of the Roman legions marching in one scene and was set to order a costly reshoot involving hundreds of extras. When he heard about the problem with the sound, Foley went on to a soundstage with a few fellow “walkers” and a set of jingling keys to simulate the sound of clinking armor and single-handedly saved the scene, eliminating the need for a reshoot!

Foley died in 1967 after working on literally hundreds of films and walking, by his own estimate, 5,000 miles doing film footsteps. His name will live through sound history — and deservedly so.

— *Blair Jackson*



[Click here](#) to read about the **Foley Recording for Tim Burton's film, Planet of the Apes**.

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**Lanny Williamson, owner of The Beach in Calgary, Alberta, shared his tips on Foley miking in the April 1994 issue of Mix:**

"A lot of the time, when you hit something, you want people to feel it in their stomach, so you don't just want the smack of it, you want the wop of it. I think you'll find that a lot of the Foley sounds today are a lot like MIDI sounds—you layer a whole bunch of things to get a specific sound. It's not as simple as miking somebody crunching through the under brush. You want more than that. To give it more character, to give it more pizzazz, to make it bigger, to make it wetter, to make it fatter.

It's really common to use a [Neumann] U87 if you want pristine bottom end. The tube 67 is really nice because it gives you a much more solid bottom end. Since they are a little clumsy, sometimes you don't want to use those bigger mics and you'll end up using like a 414, which is a little smaller and gets into places. An [AKG] 452 with an FS2 capsule is nice 'cause it has a little more air to it, and you can sock it into places and move it around quickly. The smaller mics, with a bit more brilliance, are used for some of the quick-and-dirty, high-frequency stuff—and being able to move around the Foley pits quicker. But for a really specific ID-type of Foley sound then you go for your favorite mics, go for the ones that you know will capture the true essence of whatever you're after."