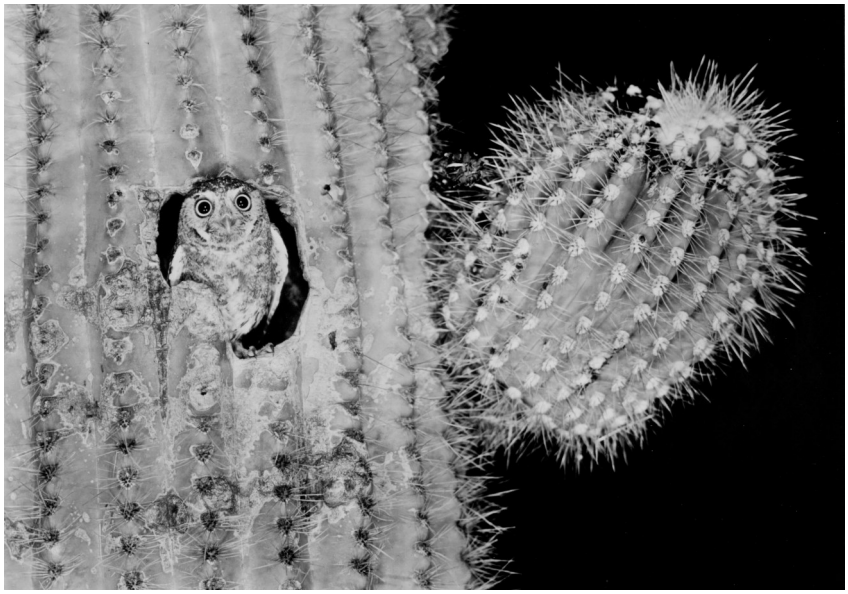
The Living Desert

By N. Paul Kenworthy, Jr.

*Oscar's Docs, 1964–85: The Front Lines at Home and Abroad p*rogram notes, 2011



An owl peers out from its nest in a saguaro cactus. Courtesy Library of Congress Collection.

In the spring of 1951, I was a grad student in the Department of Theater Arts at UCLA. I was searching for an idea for a short film to satisfy my MA degree requirements, and hopefully release in some markets to reimburse my costs. And maybe use to get a job. I remembered some modest success I had, as a dedicated amateur, with a short 8mm filmed drama, shot in my backyard, involving two insectivores: a praying mantis and a large orb -weaving spider. The flying mantis blundered into the spider's web, and an exciting battle ensued. The edited piece elicited numerous favorable comments.

I was influenced by that experience, and even more by an article that I read about Arizona's desert wildlife that featured "tarantula hawks," or large Pepsis wasps that prey on tarantulas, stinging and paralyzing them for the wasps' offspring to consume. There were no photos of the battle, only of the two adversaries. It dawned on me that there would be the "mother of all insect-arachnid battles," conflicts that occur thousands of times each day in the desert summer, and probably never observed by humans.

Could this be the backbone of a desert story, featuring the two main protagonists – wasp and tarantula – in an interesting surrounding environment of mini-dramas of desert wildlife, flowering cacti, and striking vistas. I thought it could, if I could solve a number of rather difficult problems.

The number one requirement was to locate and employ someone who intimately the behavior of the insects and arachnids, and to some extent the snakes and birds of the Arizona Sonoran Desert. I was a film person, not a naturalist or entomologist. Through enquiries with UCLA personnel, I discovered Robert Crandall, a man with tremendous experience and knowledge of these subjects. He loved spiders, sometimes keeping them as pets. I was quite fortunate to get him to join me in this venture, especially since he had a house and laboratory in the desert near Tucson. How lucky could I get?

The next challenge was to modify a high quality (a Kodak Cine Special) to enable through-the-lens focusing, with rack-and-pinion and bellows, to follow focus on small moving creatures; and a special view finder to magnify the image (Today's common reflex cameras were not then available). An expert camera modifier and machinist, Paul Roos, would install the optics. Success here was absolutely essential.

Another innovation would be a small air-conditioned studio in the desert to assist filming our subjects, most of whom are not active during the heat of mid-day, and many others are active only at night. Bob's laboratory could be converted for small table-top, desert replicated sets, dressed for either day or night, depending on which creatures we were shooting. This would also keep our subjects from running or flying away. They could live for days on the life-like sets, complete with tarantula holes, rodent tunnels, etc., and hopefully treat it like their normal habitat.

Set lighting was another problem. Depth of field, follow focus requirement, high f.stops and very slow 16mm Kodachrome reversal film meant light levels as high as 10,000 foot candles. Considering the limitation of available power and my personal funds, I chose to build my own lamps from scrap wood, in our small apartment's living room. These held various clusters of PAR 39 sealed beam bulbs for boosting to 185 volts. This created proper color temperatures and high efficiency per watt. Heat was reduced by special glass held in front. The larger lamps were exceedingly bright, although non-adjustable, and very cumbersome to move. But they did the job (when they didn't fall over!)

By June, preparations were completed, and my wife, daughter and I moved to Bob's place in the desert, where we made our first set-up in his lab. The Pepsis wasps were not yet motivated to battle tarantulas, as each wasp's egg had not yet matured to be laid on paralyzed tarantulas. We therefore shot a night sequence involving a giant toad and a big black longhorn beetle with formidable mandibles that the toad tried unsuccessfully to swallow.

Later in the summer, we worked backwards from this moment, and shot four or five more scenes with the longhorn beetles that we know could lead into the toad/beetle skirmish. This is an example of how, with Bob's advice, I could build a simple story with separate short sequences, each of which was shot without interfering with the action. Once the climaxes were shot, we took the liberty to do what was necessary to get entrances, exits, points-of-view, etc., to tie it all together.

Bob's house was in part of the desert loaded with several species of scorpions. They scuttled back and forth across the floors, and even hid in the kitchen cupboards. One morning we forgot to dump my three-year-old daughter's shoes, and the most poisonous scorpion, of the local species, stung her toe. Carol went into convulsions, foaming at the mouth. We drove at high speed to the hospital, where a shot of anti-venom saved her life.

When mid-summer came, and Pepsis wasps were gravid with their eggs, we started work on our key sequence. A tarantula hold was part of the set, and we let a spider live in it for a day. Then we introduced the wasp. Wow! Success was ours. The wasp adapted to the desert setting, and ran around the ground, looking for her prey. Upon discovering the tarantula's hold and sensing the spider's presence, she looked down into it and caused the spider – a plump female – to jump out, but not to run away from her home. Her behavior seemed almost as though she knew of the likelihood of her coming doom, but would not go down without a fight. I kind of felt sorry for her, but also very curious about how the wasp would win, considering the imposing fangs of the spider.

Thus the battle began, which really utilized the capability of my new camera and the crazy light. The desert set was so convincing to the protagonists that we could shoot more battles with new actors to get additional angles and coverage. After a battle was finished, the wasp had to drag her paralyzed prey, much heavier than herself, over various ground obstacles, to the spider's hole. This required enlarging of the hole by the wasp before she had room to drag the spider down the hole to the bottom and lay an egg on it. The egg produced a larva, which consumed the spider. It all seemed like a prodigious effort, relatively more physically demanding than anything humans had to perform during their lives.

This rewarding moment turned out to be just part of our filming that first summer. After shooting what I judged was enough for my thesis film, we returned to Los Angeles. Considerations of need for near term cash and further employment arose. I began to consider showing the material to the Disney staff, which had been producing their True-Life Adventures of wildlife for the theaters. After carefully splicing thirty minutes of the camera original, I showed it to key personnel, including producer Ben Sharpsteen, director James Algar, and writer/narrator Winston Hibler. After some minutes of projection, word got to Walt that he should drop by for a look. And look he did.

His enthusiasm resulted in his purchasing the footage. It also mandated my substitution for MA thesis film a lengthy written paper on the film's innovations. I had sold my rights to use the footage. It also created a deal for me to go back to the desert with Bob to shoot another three months the following summer, to get more film for a possible feature length release. They also wanted us to shoot a lot of stills for use in books and publicity.

During the new summer our work style was similar to the first. They couldn't give a script, just an order to make sure we got some light, comic scenes to counter the previously filmed spider and snake sequences, which were uncomfortable for some viewers. Disney supplied studio lamps, grip equipment, and a little larger building for us to use for a studio. Eventually, we dreamed up some comic scenes with kangaroo rats and a sidewinder snake (This time the snake was funny). We were, as before on our own, as our Disney director's [Algar] attention on this project kept him in Los Angeles, supervising the editing and co-authoring the narration. Occasionally I knew that some of our best scenes ended up on the cutting room floor, creating personal frustration. This in part was relieved by the marvelous contribution a creative team at Disney made with an optical printer on our scorpion mating scenes, turning our shots into a masterpiece of a scorpion square dance that audiences love.

Yes, our usual filming and dramatizing of the Sonoran Desert wildlife was a worthwhile achievement. Perhaps, with additional funding, I could have turned it into a successful, but smaller and less ambitious film. However, the more I revisit the work, now 52 years later, the more I realize that it was a good move to sell our stuff to Walt and his creative team. If "The Living Desert" continues to delight audiences, we should be grateful to Disney's artists who took our efforts and enhanced them so well.

The views expressed in this essay are those of the author and do not necessarily represent the views of the Library of Congress.

Norman Paul Kenworthy, Jr. (February 14, 1925 – October 15, 2010) was an American film director and cinematographer, mostly for Disney studio films.[1] As co-inventor of the Snorkel Camera System, a remote-controlled periscope camera, he shared a 1978 non-competitive Academy Award for technical achievement with engineer William Latady.