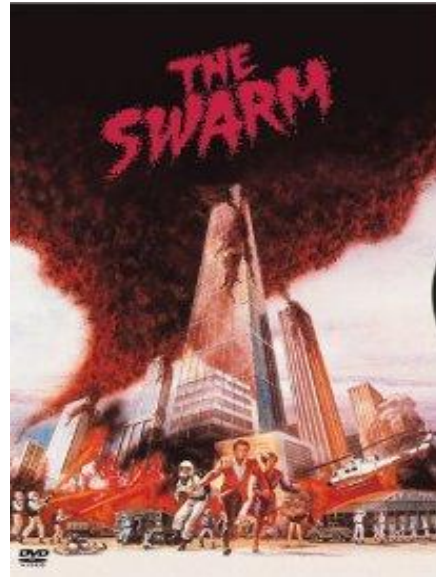


An Official 'Bad-Bug-Movie' Review
ENT 812, Insects in the Cinema
Michigan State University

The Swarm (1978)

Reviewed by Rebecca Wright



“It is more than speculation. It is a prediction.” So proclaims the trailer for Irwin Allen’s 1978 big-budget disaster epic “The Swarm”. With its multi-million dollar budget and star-studded cast, hopes were high for this film, but it turned out to be an epic flop at the box office, much to Warner Bros dismay. It spent only two weeks in theatres (1) and lost so much money that Allen is said to have forbidden any mention of it by his employees (2). Andrew Wright of Amazon.com Editorial Reviews calls it “an irresistibly hilarious chunk of honey-roasted cheese-70’s style.” (3)

As indicated by the tagline, this movie was “predicting” what many people felt was a very real threat to the American people by using the Africanized “killer” honey bee as its antagonist. After the accidental release of African queens in Brazil in 1957, fear quickly spread to America, where the bees were expected to invade within a few years, traveling at 100-200 miles per year (4). This fear was taking over the media in the 1970’s, making appearances in “The Deadly Bees” in 1967, “Killer Bees” in 1974, “The Savage Bees” in 1976, and “The Swarm”, “The Bees”, and “Terror Out of the Sky” all in 1978, to name just a few feature length films (2). It was also present in print, with articles in Newsweek, National Geographic, and Rolling Stone, and on the small screen, as news reels and the recurring Saturday Night Live skits featuring “The Killer Bees”, comedians dressed in bee costumes with pistols and ammunition belts, and thick Mexican accents.

Another societal anxiety that this movie has been postulated to address is the controversial war in Vietnam. According to Mikel J. Koven in his book “Film, Folklore, and Urban Legend” (5), there are many signs of this underlying metaphor. For example, he cites the color of the bees as a reference to the colors associated with the Vietcong, with the stereotype of “yellow” skin and the black uniforms of the Vietcong soldiers. Another individual explains the comparison in terms of technological advancement. He explains that the viewer can look at the bees, like the Vietnamese, as a less technologically advanced enemy which is facing the United States Military, only this time, the military wins. He also points out that when the General demands the spraying of Neutracyde, stock footage of military planes flying over a

Vietnamese forest is shown (unconfirmed) (2). As Koven explains, this movie attempts to restore the American people's faith in the military, saying "do not criticize the military, [...] for it exists to protect you from invaders, and there is one such invader currently on its way to your hometown, and without the army, you will die." (5).

Two other very present themes in the movie are *man versus nature* and *environmental awareness*. These were very current issues in the 1970's, with the publication of *Silent Spring* in 1962, formation of the Environmental Protection Agency in December of 1970, the DDT ban in 1972, and the passing of the Clean Air and Water Acts in 1977 (6), among others. In this film, man v nature is evident from the start, when the viewer sees an entire military base decimated by a swarm of bees. This theme continues as they declare "war on the Africans". However, in the course of this war, the military are required to, initially, take an environmentally-friendly approach to ridding America of the bee menace as Brad Crane (Michael Caine) gives a vehemently-delivered environmentalist speech about the possible ramifications of simply unleashing a potent pesticide on the Texan ecosystem. By the end of the film, the environmental effects of the military actions are more questionable. The entomologist who was so opposed to the liberal use of pesticides is seemingly fine with the dumping of barrels of oil into the Gulf of Mexico. Thus, as a whole, this movie is unclear on its position on environmental issues, mirroring the opinions of many individuals in the 1970's.

Plot Summary

As the film opens, the viewer is taken through a deadly-still army base in late-1970's Texas. Men are draped over equipment and it is all too evident that something catastrophic has happened here. Men in orange suits are combing the base, looking for the cause of the devastation. They are soon revealed to be a military unit led by General Slater (Richard Widmark) and Major Baxter (Bradford Dillman). Soon, Dr. Brad Crane (Michael Caine) makes a dramatic entrance, declaring that the grisly scene is the aftermath of a swarm of killer bees passing through the base. General Slater is incredibly distrustful of Dr. Crane, ordering him held and examined as a suspect in the killings. Dr. Crane assures General Slater that he is to be trusted and recommends that the General confirm his standing with the President's advisor. While the General is doing so, two helicopters fly into the swarm of bees and plummet to the ground in flames. The President and his advisor not only confirm Dr. Crane's credentials, they place him in full operational command of the base and the defense against the bee menace, much to General Slater's chagrin.

The first taste of medical incompetence that will permeate the movie comes as Dr. Helena Anderson (Katharine Ross) enters the command center just before Dr. Crane's credentials are verified and tells the General that she has a few survivors of the attack in the medical quarters, but that they are in poor shape. Dr. Crane says he has Cardio-pep, a new experimental compound, in his van but the General forbids its use, then both doctors seem to forget about it entirely, distracted by the communication from the White House. Dr. Crane, upon receiving command of the base, orders the soldiers to get his supplies from the van and obtain all necessary equipment and personnel for his coming war.

The film leaves the military base and heads to a quiet meadow where the Durant family is getting ready for a picnic. This turns to disaster as the bees attack, killing Mr. and Mrs. Durant and stinging their son Paul (Christian Juttner) twice before he can get in the car. Paul

drives to Marysville, where he receives medical attention and Dr. Crane gets a chance to examine him, showing off his previously unmentioned psychology prowess.

Dr. Crane and the soldiers rush to the site of the attack, where in a very Holmesian manner, they manage to draw very grand conclusions from what seem like insignificant details. For example, Dr. Crane finds bits of plastic on the ground and after announcing that he is “afraid to speculate about the significance of the paper cup”, he does just that and says that the bees may be using the plastic to insulate their hives, which would make them very intelligent indeed.

After the crew returns, Dr. Crane’s friend Dr. Krim (Henry Fonda), world renowned endocrinologist, arrives at the the base and performs what appear to be forensic autopsies on the men who were at the base. His results indicate that the bee venom is “more toxic than the Australian Brown-Box Jellyfish” and that three stings will render a full-grown man unconscious in 60 seconds and shortly thereafter, kill him. Dr. Crane incredulously replies that he “never dreamed it’d be the bees. They’ve always been our friends.”

In a completely unrelated side story, while Dr. Krim is examining the bodies, Jud Hawkins (Slim Pickens) arrives and demands to see his son. The General, who is amazingly submissive throughout the entire movie, relents and lets him in. When he finds that his son has been killed, Jud picks up the body bag and begins to carry it out. After another brief argument, General Slater again submits to Jud’s wishes and he carries the body of his son out the door.

After more of Dr. Crane’s scientists arrive on the base, a press conference is held in which the General and Dr. Crane apprise the visiting scientists and local town officials of the danger posed by the bees. Dr. Crane presents incontrovertible evidence, in the form of wing venation, that these bees are in fact mutated African Killer bees. He was able to make this conclusion based on a series of tests run on the one bee collected after the Durant attack. Also during this press conference, the information changes when Dr. Krim announces that four, not three, stings are deadly.

The scene changes now to the hospital, where the surviving Durant, young Paul, is escaping with his friends. The viewer sees that life is returning to normal in the quiet town of Marysville, with the ill-conceived Flower Festival in full swing, and the love triangle between Schoolmarm Maureen (Olivia de Havilland), the town mayor Clarence (Fred McMurray), and handyman Felix (Ben Johnson) which was introduced in the earlier Marysville scene, is still going strong, but without any direction. Paul and his friends ride their bikes to the site of the attack and, succeeding where the military failed, find the hive flourishing in a nearby tree. After some tactical planning, they throw Molotov cocktails at the hive, which has the undesired result of inciting the hive to be on the defensive. It heads toward Marysville in an apparently vengeful frenzy.

Dr. Crane and the General get into a full-on yelling match at the base when General Slater suggests that they simply spray the bees with a pesticide and be done with the whole mess. Dr. Crane proceeds to, in his most emotional display of the entire movie, inform the General that “The honey bee is vital to the environment! Every year in America, they pollinate six billion dollars worth of crops! If you kill the bee, you’re gonna kill the crop! If you kill the plants, you’ll kill the people!”

Dr. Crane and Helena are on the road looking for Paul when they see the swarm, stirred up by the boys, headed for Marysville. They rush back to town to warn the people to get inside,

but many don't make it, including several students at Maureen's school. Dr. Crane, Helena, and the pregnant Rita (Patty Duke) escape the swarm by hiding out in a local diner. Unfortunately, Helena is stung before they make it in. Eventually, the death toll reaches well over 200, and while Helena is in the hospital, Paul admits to disturbing the swarm.

When he returns to the base, Dr. Crane learns that one of the other scientists has managed to capture bees on the surface of the lake. These bees are being held in a sealed lab on the base. They are able to "milk" these bees for venom, which Dr. Krim can study, perhaps leading to the development of an effective antitoxin, and giving the characters the opportunity to practice some very questionable science, such as handling visible amounts of highly toxic bee venom with bare hands.

After the deadly bee attack in Marysville, the town is evacuated. Unfortunately, the train carrying the townspeople is derailed by the bee swarm. It rolls down a hill and catches fire, all because the conductors, like everyone else in the film, are driving with the windows open with a killer bee swarm in the area. The monitors at the base show that there are 17 survivors, but they are never mentioned again, so it is uncertain whether Maureen and her beaus are alive or dead, and that storyline is never resolved.

Once the entire population of Marysville has been killed, the General and Dr. Crane agree that something must be done. Dr. Crane has found a pesticide that will apparently only kill the invading species, not the native honey bees. It is in the form of pellets, and they drop it by the bagful from the open door of a helicopter. Much to Dr. Crane's surprise, the bees do not ingest the pellets, seeming to sense that it will kill them, in his opinion.

Back in the hospital, Paul has relapsed from his sting, following the precedent set by the survivors at the base, who relapsed and died. Paul goes into cardiac arrest while Helena, a military doctor, is in the room. She runs out and gets another doctor, who has recently delivered Rita's baby. Unfortunately, they are too late to save Paul.

Back at the lab, Dr. Crane tells Dr. Krim "Everything we've tried has failed. Our last hope is your mass antidote!" Krim has developed an antidote, but has not yet tested it on humans. He refuses to test it on Dr. Crane, instead waiting until everyone else has left the room and testing it on himself. In a moment of brilliant scientific technique, the wheelchair-bound researcher sets up tape recorders in his deserted lab, then injects himself with a dose of venom equivalent to six stings, twice what he earlier stated would render a healthy adult unconscious in 60 seconds. He then reasons that the average person would need approximately one minute to get past initial panic, find, and administer the antidote. He waits 66 seconds, then administers the antidote by self-injection. His vital signs begin to stabilize and Helena enters. While she watches, Dr. Krim suddenly relapses. As he is flatlining, she rushes from the room, only to stroll back in a moment later with an oxygen tank. While she administers oxygen, another doctor comes in, looks at the heart monitor and checks for a pulse. At this point, all feeble attempts to revive the Dr. are stopped and Dr. Crane enters. He looks moderately upset for a moment as the rest of the occupants of the room stand quietly, facing away.

Deciding it is time to try to get ahead of the bees, the commanders send Dr. Hubbard (Richard Chamberlain) to see Dr. Andrews (Jose Ferrer), the lead scientist at the nuclear facility nearby, to warn him of the impending danger and urging him to shut down the plant. Dr. Andrews protests that they are equipped to deal with anything and, as if on cue, alarms start

blaring and the bees appear, dramatically killing Drs. Andrews and Hubbard, and blowing up the nuclear facility in a truly spectacular explosion.

By now, the bees are well on their way to Houston, where General Slater has moved the defense operation, having effectively relieved Crane of his command. Dr. Crane, having had an epiphany, rushes to Houston to tell the General of his new ideas. Showing no credentials, he gains access to the base of operations in Houston, on an upper level of a skyscraper. General Slater, seeming unsurprised, tells him that the bees have “become immune to any pesticide”. He has ordered a “massive man-made burning of Houston”. This burning is accomplished very ineffectually via military flamethrowers. This might have been less disastrous had the soldiers wielding the flamethrowers not used them on each other and inside the buildings. As the city is burning, General Slater wonders “Will history blame me, or the bees?”

During the excitement, Dr. Crane finds time to visit Helena, who suddenly relapses from her earlier sting. She is in poor condition, and the General and Major Baxter overhear Dr. Crane talking with God. Major Baxter wonders whether they can count on a scientist who prays, and General Slater replies “I wouldn’t count on one who doesn’t.”, thus summing up the entire religious aspect of the film.

As the burning becomes progressively more chaotic, Dr. Crane tells General Slater that he is ready with a final experiment. He has analyzed the tape of the first attack and found that the sound of the alarm that was being tested at the base at the time of the attack mimics the mating song of the bees. This can be used, he postulates, to draw the bees out of Houston. In keeping with the tone of increasing chaos, the bees have managed to get inside the command center. General Slater and several others heroically sacrifice themselves so that Dr. Crane can rescue Helena and somehow manage to get out of the building, then out of Houston, without getting stung.

With no explanation of how it was accomplished, the next scene shows Dr. Crane and Helena on a sunny airfield, both healthy and in full command of their senses, with not a bee in sight. They organize the final strike, attaching speakers emitting the alarm/mating sound to helicopters. These speakers are then dropped into the Gulf of Mexico, where they have emptied barrels of oil into the water. The speakers call the bees out of Houston and onto the Gulf, where the military can fire rockets to ignite the oil, causing one final, huge explosion, thereby eradicating the killer bees. The film closes with Helena and Dr. Crane on the beach, discussing the fate of humanity.

Helena: Did we finally beat them? Or is this a temporary victory?

Dr. Crane: I don't know, but we did gain time. If we use it wisely and if we're lucky, *the world might just survive.*

The Major Players

Director: Irwin Allen

Irwin Allen is affectionately known to many as “the Master of Disaster” as a result of his earlier thrillers “The Poseidon Adventure” (1972) and “The Towering Inferno”(1974). “The Swarm” was, sadly, the beginning of the end for Mr. Allen. After “The Swarm”, Allen made two more big-budget flops and largely disappeared from the world of feature films. Since that time, he has designed a ride at Universal Studios and done a few TV shows and miniseries. In 1983, he was awarded the Razzie “Worst Career Achievement” Award (7).

Writers: Stirling Silliphant and Arthur Herzog Jr.

“The Swarm” was based the novel by Arthur Herzog, Jr. Herzog wrote both fiction and non-fiction, and has had two of his books made into movies (“The Swarm” and “Orca”). There are rumors that Dreamworks studios have picked up a third novel, “IQ 83”, with intentions of making it into a feature film (8).

The screenplay for “The Swarm” was written by Stirling Silliphant, a gifted writer with whom Allen had collaborated in the past, on both “The Poseidon Adventure” and “The Towering Inferno”. A Detroit native, Silliphant has written over 50 books in addition to his many screenplays (9).

Dr. Brad Crane: Sir Michael Caine

Dr. Brad Crane, the resident condescending entomologist, represents an extreme environmentalist standpoint. He protects the bees at the expense of the inhabitants of Marysville. He does, however, eventually save the day...at least for now.

Sir Michael Caine has been rumored to have said in an interview with Michael Parkinson that “The Swarm” is the worst movie he has ever made, and that “It wasn't just me, Hank Fonda was in it too, but I got the blame for it” (1). To date, Caine has been in 146 movies and television shows as well as stage productions, won two Oscars, and in 2000, was knighted for his contributions to the performing arts (10).

Captain Helena Anderson: Katharine Ross

The role of Helena changes greatly as the story progresses. At the beginning of the film, she is introduced as “Captain Helena Anderson” and while still in heels and a skirt, she does seem knowledgeable and competent as a doctor. As time passes, she becomes much more the damsel in distress that Dr. Crane must save, cementing his place as the hero. By the end of the film, she is referred to merely “Helena” and has apparently forgotten everything she learned in medical school, including CPR.

Katharine Ross is perhaps best known for her role as Elaine Robinson in “The Graduate” (1967), for which she received an Oscar nomination. She also played the lead in the 1975 filming of “The Stepford Wives”. In addition to her career on the screen, Ross is a successful author of Children’s books (11).

General Slater: Richard Widmark

General Slater is initially portrayed as the stereotypical military officer. He is very blunt and straight to the point with Dr. Crane. However, as the movie progresses, the audience sees that he continually bows to the wishes of others, even when they have no authority to make demands of him, as is the case with Jud Hawkins. Finally, he “crosses over” to Dr. Crane’s

camp, when his traditional military interventions prove ineffective. He heroically sacrifices himself, restoring his honor in classic military fashion.

Ironically, Richard Widmark was denied service in the United States Military due to a perforated eardrum. He was, however, a very successful actor, both on stage and screen, prior to his role in "The Swarm". He was nominated for a Best Supporting Actor Oscar for his role in "Kiss of Death" in 1947 (12).

Dr. Walter Krim: Henry Fonda

Dr. Krim is "the best endocrinologist in the world", and a close personal friend of Dr. Brad Crane. He is brought in to study the incredibly toxic bee venom and develop an antidote that can be distributed for widespread use. In an ill-conceived move, he tests the antidote on himself, resulting in his death and subsequently, the end of the hunt for an antidote.

Henry Fonda was a highly accomplished stage and screen actor, with two Oscar nominations prior to "The Swarm" for his roles in "Twelve Angry Men" (1957) and "The Grapes of Wrath" (1940). He won an Oscar for best actor in 1982, for "On Golden Pond", as well as the Academy's Lifetime Achievement Award in 1981, the AFI Lifetime Achievement Award in 1978, and the Tony Lifetime Achievement Award in 1979. He also has a star on the walk of fame (13) (14).

Remaining Cast

"The Swarm" had a truly star-studded cast. The cast contains at least seven Oscar winners, and several Oscar nominees. Most of the core cast had Golden Globe wins or nominations, stars on the Walk of Fame, and a multitude of other awards.

Character Profiles

Many of the characters in "The Swarm" fit very neatly into a stereotypical role. It is very obvious, for example, when the scientists arrive on scene. Aside from Dr. Crane, who is our hero and therefore very well-dressed, they are dressed in very much the classic "nerd" attire. Ill-fit, unflattering clothes, heavy glasses, etc. The General, on the other hand, is loud, gruff, controlling, and immediately gravitates toward the fastest, most efficient solution, environment be damned. He is unusual in that he does tend to be submissive in odd situations, but otherwise is very much the stereotypical General. Captain Anderson at first fits the 1970's independent female stereotype, but gradually morphs into a weak, dependent damsel in distress that is more classic.

The Role of Insects in "The Swarm"

Using an insect as the primary antagonist seems important for this film. It provides an enemy that is both unexpected and surprising to the military. They have never prepared for an attack by insects and do not know how to deal with it. This plays into the public image of the military at the time. The use of a swarming insect also allows for rapid spread and vast numbers of the creature. It also allows the writers to probe the real concerns of the American people, both with the fear of the very real organism and with the growing concern about the

environment and overuse of pesticides. Had Allen and the writers chosen to use, say, aliens as their villain, the entire pesticide drama would have been lost.

The Science Behind the Film

“The Swarm” displays at best a poor grasp of the scientific concepts it is presenting. First and foremost, the general lack of proper scientific protocol is appalling. The most blatant examples of this are the lack of gloves as the doctors are handling large amounts of bee venom, and Dr. Krim’s unsupervised administration of high doses of toxin, over-long delay in administering the antitoxin, and lack of emergency procedures should the antitoxin not prove effective. Among other examples of poor science in this movie are the incredibly small ($n=1$) sample size when identifying the killer bee, the endocrinologist performing very rapid autopsies of the dead soldiers, and the military removing their helmets before determining the cause of death of the initial soldiers (this may be excusable from a science perspective given that they are NOT scientists, but is not forgivable from a common sense/military operating procedure standpoint).

As for the “bee facts” throughout the movie, many of these are inconsistent over the course of the movie, and incorrect or unbelievable in their general forms. For example, Dr. Krim states that either three or four stings, depending on the scene, is enough to kill an average adult. They do indicate that these are *mutated* African Killer Bees, but this is still incredibly extreme. To reach that level of toxicity in an adult who is not highly allergic, normal Africanized Honey Bee venom would have to show an approximately 400-fold increase in toxicity. According to the United States Department of Agriculture- Agricultural Research Service, real Africanized bee venom is toxic at a level of approximately 10 stings per pound of body weight (15), meaning an average adult would have to be stung well over 1000 times to reach a lethal level.

To get the bee venom, the scientists milk the bees using electrical impulses. This is, in fact, an accurate representation of the process that has been used in various forms since the 1950’s. In addition, the appearance of the venom is, overall, accurate. While new bee venom is clear, as it dries and becomes oxidized, the venom takes on a yellow or yellow-brown color and crystalline form which can be scraped off the collection plate for use in experimentation (16). The venom in the film would likely not have had time to oxidize to the color shown, but this is a minor point. On the other hand, the amounts of venom the scientists in the movie obtain on their collection plates seem far-fetched. The coin-sized spots visible on the plates seem much too large to have come from the bees milked. Images available online indicate that the venom actually collected is not in large neat circles, rather finely distributed across the surface of the plate (17) (18).

The fact that the scientists and military were only able to find one dead bee to study prior to the attack on Marysville is highly unusual. When honey bees sting, their stingers and attached venom sacs and muscles are ripped violently from their abdomen. While they are able to survive and function normally for a period of time after this happens, it seems that at least a few of the bees would have been caught in the missile base, even if they all managed to remove themselves from the picnic site. Dr. Crane explains that they washed down the Durant’s car before he was able to secure bees from it, but it seems unlikely that the

townspeople, faced with a traumatized child, would have then cleaned the area where the car crashed and where it was washed so immaculately that no bees would remain to be found.

In their handling of the swarming of Africanized Honey Bees, the movie did have many facts correct. Africanized bees are very defensive of their hives, so disturbances, such as the boys throwing flaming bottles at the hive, cause a violent reaction. The bees are also very tenacious, willing and able to follow an offender a great distance and lay in wait over ponds or other bodies of water. They will also swarm, or move to a new location, much more frequently than a European Honey Bee, depending on the level of disturbance (15). This can be seen in the movie as the swarm heads for Houston, though in the film it is made to look as though they are intentionally targeting Houston, which is not a typical bee behavior.

An interesting bee moment in the movie is Dr. Crane's explanation of the pieces of plastic on the ground. He notes that the American honey bees (which should, more appropriately be called European Honey bees) have weak mouths. This does seem to be true. He then goes on to explain how the Africans, as they are frequently called in the movie, have very strong mouth parts and are tearing apart plastic cups. It is unclear how he comes to the conclusion that the plastic must have been shredded by bees and not some other creature, such as raccoons or other small mammals one would expect to find prowling around an abandoned picnic site. He then postulates that these bees might just be using the plastic to insulate their hives, crediting them with extraordinary intelligence. This all seems highly improbable from a scientific standpoint.

Finally, the bee venom in the film is known to cause hallucinations in its victims. On several occasions, the viewer is shown a giant bee floating in front of a recently-stung individual, most notably when Paul is in the hospital and just before Dr. Krim enters cardiac arrest. There is no evidence available that would suggest that bee venom actually causes hallucinations, even in the most severe allergic reactions.

Legacy

"The Swarm" was one of the last major disaster films of the 1970's, and heralded the end of an era for Irwin Allen. It was not, however, the end of the killer bee movies. There was a lull in their popularity as the public realized that the threat was not as extreme as Hollywood would have them believe, but they have seen a minor resurgence, with "Deadly Invasion: The Killer Bee Nightmare" in 1995 and "Killer Bees!" in 2002.

References:

1. The Swarm (Film). *Wikipedia*. [Online] 2010. [Cited: April 5, 2010.] [http://en.wikipedia.org/wiki/The_Swarm_\(film\)](http://en.wikipedia.org/wiki/The_Swarm_(film)).
2. The Swarm (1978). *The Internet Movie Database*. [Online] 2010. [Cited: April 5, 2010.] <http://www.imdb.com/title/tt0078350/>.
3. The Swarm (1978). *Amazon.com*. [Online] [Cited: April 5, 2010.] <http://www.amazon.com/Swarm-Michael-Caine/dp/B000067FP4>.
4. National Museum of Natural History, Entomology Section. Killer Bees. *Encyclopedia Smithsonian*. [Online] [Cited: April 5, 2010.] http://www.si.edu/Encyclopedia_SI/nmnh/buginfo/killbee.htm.

5. Koven, Mikel J. *Film, Folklore, and Urban Legend*. s.l. : Rowman & Littlefield, 2008, pp. 83-96.
6. Timeline, 1970's. *EPA.gov*. [Online] [Cited: April 5, 2010.]
<http://www.epa.gov/history/timeline/70.htm>.
7. Irwin Allen. *Internet Movie Database*. [Online] [Cited: April 5, 2010.]
<http://www.imdb.com/name/nm0000740/>.
8. Arthur Herzog, Jr. *Internet Movie Database*. [Online] [Cited: April 5, 2010.]
<http://www.imdb.com/name/nm0381290/>.
9. Stirling Silliphant. *Internet Movie Database*. [Online] [Cited: April 5, 2010.]
<http://www.imdb.com/name/nm0798103>.
10. Michael Caine (I). *Internet Movie Database*. [Online] [Cited: April 5, 2010.]
<http://www.imdb.com/name/nm0000323>.
11. Katharine Ross. *Internet Movie Database*. [Online] [Cited: April 5, 2010.]
<http://www.imdb.com/name/nm0001684>.
12. Richard Widmark. *Internet Movie Database*. [Online] [Cited: April 5, 2010.]
<http://www.imdb.com/name/nm0001847>.
13. Henry Fonda. *Internet Movie Database*. [Online] [Cited: April 5, 2010.]
<http://www.imdb.com/name/nm0000020>.
14. Henry Fonda. *Internet Movie Database*. [Online] [Cited: April 5, 2010.]
http://en.wikipedia.org/wiki/Henry_Fonda.
15. Africanized Honey Bees. *United States Department of Agriculture- Agricultural Research Service*. [Online] [Cited: April 5, 2010.]
<http://ars.usda.gov/Research/docs.htm?docid=11059>.
16. *Bee Venom: Frequently Asked Questions*. Simics, Mihaly. 1996, American Bee Journal, Vol. 136, pp. 107-109.
17. Chungjin Biotech Co., Ltd. How to Collect Bee Venom. *YouTube*. [Online] July 20, 2009. [Cited: April 5, 2010.] Accessed April 5, 2010.
<http://www.youtube.com/watch?v=SGQso0dWwy8>.
18. Bee Venom Collector. *TradeKorea.com*. [Online] [Cited: April 5, 2010.]
<http://www.tradekorea.com/sell-leads-detail/S00003444/Bee%20Venom%20Collector.html>.
19. Biochemistry: How to Milk a Bee. *Time Magazine*. February 15, 1963.

Other Useful or interesting links:

Ken Begg's very detailed (and very entertaining) review of "The Swarm":

<http://jabootu.com/acolytes/brandiweed/swarm.htm>

The full film on YouTube (~10 min segments): <http://www.youtube.com/user/oldclassicmovies2>

Highlight Reel on YouTube: <http://www.youtube.com/watch?v=YWnxqUfRJTA>

National Geographic Video on Killer Bees: <http://www.youtube.com/watch?v=d-7kKqgPEGs>

Killer Bee Interesting Facts: http://www.youtube.com/watch?v=7efERO0_LmQ

"The Killer Bees" SNL segment: <http://www.hulu.com/watch/1476/saturday-night-live-the-killer-bees>