

BANTHAN TRACKS

JOURNAL OF THE OFFICIAL STAR WARS FAN CLUB

MODELMAKING



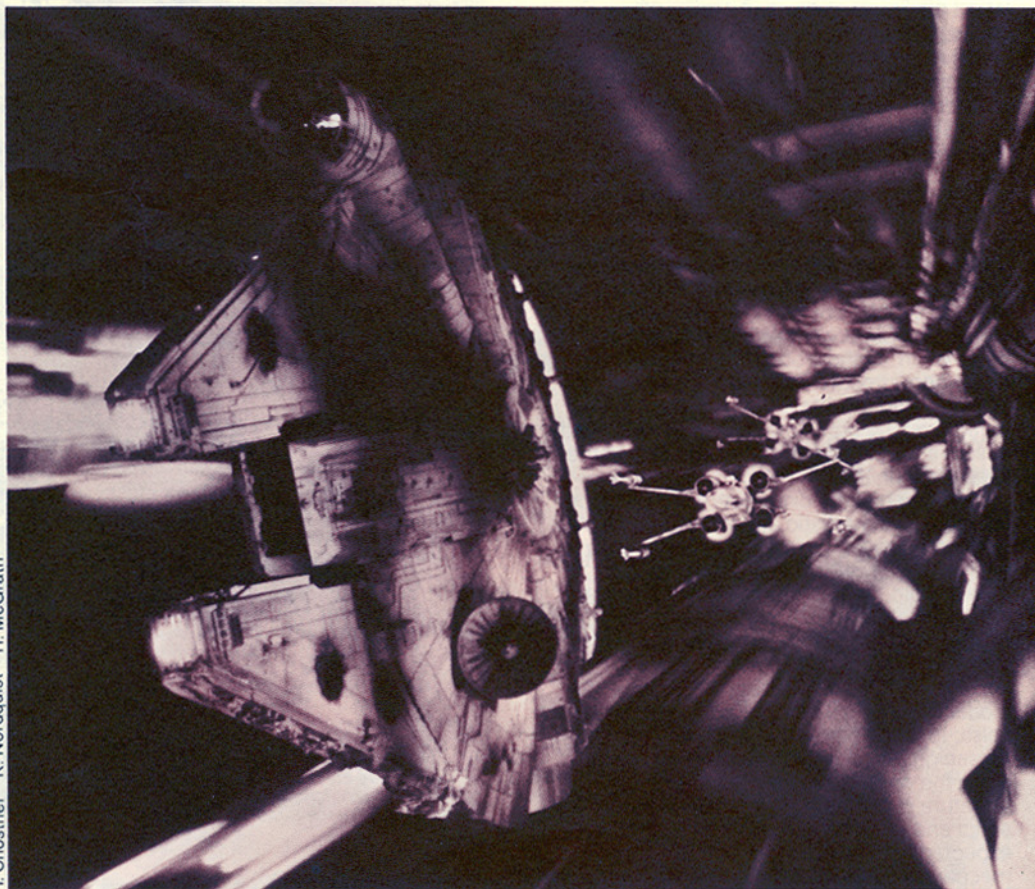
Supervising Modelmakers Lorne Peterson and Steve Gawley were responsible for managing the construction of more than one hundred seventy-five miniature spacecraft and sets for RETURN OF THE JEDI. Working with a team of up to twenty-five modelmakers they created models and sets for the space battle and the Rebel attack on the Death Star. Their creative ingenuity, backed by mathematical exactness and industrial design know-how, was applied to a variety of the most sophisticated and the simplest materials. Using everything from paper cups to fiber optics they created whatever the story and the camera called for. The results ranged from the 1 1/2" Millennium Falcon to more than three hundred feet of Death Star tunnels. Working closely with Visual Effects Directors, they created for the screen the most believable three dimensional trappings ever attempted for an imaginary universe.

Canadian-born and California-schooled, Lorne Peterson's work on the tangible aspects of the Saga dates back to STAR WARS. At that time Peterson had his own small industrial design and model company. A college friend asked him if he would be interested in doing some movie work for a couple of months. The months stretched into years and Peterson has been with Lucasfilm ever since. He is currently at work on INDIANA JONES AND THE TEMPLE OF DOOM.

Steve Gawley has also been involved in all three STAR WARS movies. He grew up in Long Beach California and was involved in a five-year Industrial Design program at Long Beach State when he took a leave of absence to draft some STAR WARS space ships for the Modelshop. He returned to get his degree in Industrial Design before working on EMPIRE. After JEDI, Gawley began work as Supervising Modelmaker on STAR TREK III.

Steve Gawley: In the beginning of special effects (SPFX) production, the modelshop always starts first. We feed the camera teams things to shoot, and then go on to build something else. Lorne and I split up the modelshop supervising responsibility on JEDI. I helped supervise the space battle and the final attack sequences. Lorne had the sand, forest, and part of the space battle sequences. We did models, miniature sets, props, you name it.

Lorne Peterson: George Lucas and Art Director Joe Johnston worked on plans for JEDI SPFX sequences for a year prior to the time actual production started at Industrial Light and Magic (ILM). George has a lot to do with the look of all the vehicles, and worked closely with Joe Johnston in the locking down of preliminary



T. Chostner K. Nordquist R. McGrath

storyboards. Once Joe's storyboards were approved, the ILM people began to get involved. The creative juices got going as input from the different sections—the cameramen, modelmakers, moldmakers, optical people—came together. Decisions were made as to what was possible to attempt to produce and what wasn't. Storyboards were changed, and as the ball really got rolling, the modelshop was a very busy place.

We had to coordinate a lot of our model construction with what was being done in England and how their sets related to what we were going to do. Scale was very important. Based on what lens the cameraman was going to use, what the size of the set in England was, and the size of the human beings in relation to the set; we could figure out mathematically exactly what size the model should be.

The beginning of many models is mathematics. I tell people who say they never use the math they learned in school—we do! Sometimes we approach a project like a detective story. When we were making a model that had to match in scale something we couldn't go to measure ourselves, we would use a reference photo. That's a picture of the set, or whatever, which has in it somewhere a guide to size. The size guide could be a person exactly six feet tall, or it could be a long stick painted black and white at one foot intervals. That would be the "constant." From this information we work out an algebraic formula that solves the problem of what size the model should be. There are just a few basic formulas from first year algebra or geometry that are essential to know, and of course how to apply them, and when. People who say they can eyeball something,

eventually make mistakes. It needs to be more precise than that. We're doing something now on *INDY II* (*INDIANA JONES AND THE TEMPLE OF DOOM*) involving a miniature set and about 25,000 pounds of water. The safety factor involved in this kind of SPFX work demands mathematical exactness.

SG: The modelmaker tries to satisfy everyone's needs. We would take the prerequisites set up by the storyboards and the art direction and go back to our area and make foam core or cardboard mock-ups of what they called for—sort of three-dimensional sketches. The next person we had to satisfy was the cameraman. We would show him the mock-up of let's say, a conning tower. He'd look through the lens he planned to use for the shot that the model would be in to check it for size, and whatever other requirements he had. He'd then let us know if it was too big, too small, alright, or whatever. When the mock-up filled all the qualifications, we could then start to build the actual model. That's when our work really became exciting. At this point we could bring our own ideas into play as to detailing and how to make the thing work while at the same time being flexible for changes and additions.

LP: I've spent less time in the last few years doing models myself. I used to be a solitary worker. I tried to run the department and get my own personal job satisfaction from making a model from beginning to end. Now as the projects get bigger I spend more time as Modelshop Supervisor listening to all the information, all the input, that is coming in from all the departments. That way I can keep an overview and be sure all the elements come together at the right time. I need to have ready answers for the coordinators who look to me to keep them on the right track. I also have to decide which of the crew gets which project. Besides having artistic and technical expertise, a talented modelmaker must also be ready to deal effectively with cameramen, the Art Director, etc. Sometimes I match a talented neophyte with a more experienced person so he or she can learn the ways of interacting and exchanging information with the other departments. Usually, though I'll choose one modelmaker to follow a project from start to finish; to be responsible—along with myself—for seeing that everything gets done right all along the way. He'll design the aluminum armature or skeleton after finding out from the script and the cameraman all the maneuvers expected of the model, whether it will have mechanical flaps that move, and whether it will be motorized or use stop-motion. At the same time he'll start making patterns in wood or plastic that will be the outer shape of the thing.

SG: There are a lot of different skills involved in modelmaking. You don't have to be a jack-of-all-trades, but it helps to be versatile. We have people in the model shop that have expertise in drafting, airplane construction, boat-building, industrial product design, moldmaking, sculpture, electronics machining, carpentry, architecture; a lot of three-dimensional art background. It's important also to know how to work the machines, and to know the materials—plastics, metal, wood.

LP: Our mandate for the *JEDI* models was to make them light, sturdy, and indestructible. We used a lot of aluminum. During *EMPIRE* we found a new material developed for use on real airplane wings which we used for *The Executor*.

Continued

creativity contest

THE WINNERS

The seven categories of the 1983 Creativity Contest drew over 3,000 entries from around the world. The most popular categories were two dimensional art and literature. As always we were amazed by the variety and creativity of all of the entries.

Judging was very difficult and a challenge to everyone involved. Final judging decisions were based on creativity rather than technical ability. Age was also taken into consideration.

We thank everyone for entering and now we are pleased to announce the 1983 Creativity Contest Winners!

□ □ **Mary Paterno**

The Grand Prize Winner is Nicole Courtney's radiodrama, *THE DARK LORDS OF THE SITH*.

The Dark Lords of the Sith, by Nicole Courtney

It is twenty years after the confrontation on Endor and the Alliance is still battling the Empire. Headed by Lord Lugar, of the Lords of the Sith, the Empire has developed a new weapon capable of destroying all life on a planet. They have just begun testing it as Fayber Solo is returning to Tatooine from a school vacation. Her ship is boarded by Imperial troops and after its release is diverted to another Rebel outpost. While there, the Imperial weapon is tested once again and all communication with Tatooine ceases. Fayber mistakenly assumes all her family is lost. Vowing revenge she steals a transport and heads to the Dark Planet to confront the Lords of the Sith. Once airborne she discovers an eccentric stowaway, Prof. Tumbleseed. Together they embark on the adventure of their lives.

First Place 2-D Art



First Place 3-D Art



First Place Models



First Place Miscellaneous



LITERATURE

Judge: Anita Gross, Director of Publishing; Fan Club Staff

First

Y. DE MEY VAN STREEFKERK, Zoetermeer, Netherlands, Age 15. JEDI Post—Official Jedi newspaper

First

ELLEN M. MORTIMER, Staten Island, New York, Age 28. CHERYL P. MCDANIELS, Astoria, New York, Age 29. Jedi Rising—novel

Second

JIM MILLER, Berlin, West Germany, Age 16. Evil Yet Lingers—Illustrated short story

Third

ANN RAFFEL, Westport, Connecticut, Age 15. Injustice—short story

Fourth

COOKEE V. KLEIN, New York, New York, Age 22. "The Ten Thousand Things"—a dialogue

Fifth

DAWN COTTER, Concord, Vermont, Age 10. The Training of the Jedi—short story

Sixth

RICHARD SPEARS, Dalton, Georgia, Age 21. Kashyyk—Views of the Wookiee Planet—illustrated booklet

Seventh

C. A. BUCAR, Victoria, Canada, Age 29. Vestiges of Darkness—novella

Eighth

JAMES H. MURPHY, Jr., Santa Clara, California, Age 33. Colonel Stryker—short story

Ninth

ANTHONY BOSANAC, Toronto, Canada, Age 14. Jedi Magazine

Tenth

RACHEL TOOD, Barberton, Ohio, Age 10. STAR WARS Limericks

Eleventh

MAY-LEE CHAI, Vermillion, South Dakota, Age 16. untitled short story

Twelfth

ELIZABETH RICKERT, Hicksville, New York, Age 28. Revenge of the Jedi—alternate story

Thirteenth

TIMOTHY LAKE, Houston, Texas, STAR WARS poem

Fourteenth

TYLER STALLINGS, Louisville, Kentucky, Age 17. Counter Rehearsal—poem

Fifteenth

E. KOEDIJK, Amsterdam, Netherlands, Age 15. Revenge of the Jedi—comic strip

First Place Film

Vader Knows Best, by John Richardson
"What would happen if Darth Vader had kept custody of his children? What if the epic tale was told in the form of a situation comedy? This show might be called... Vader Knows Best." How would Darth deal with Luke's desire to be a Jedi Knight? How would he react to anti-Death Star rallies? Would he let Leia date Han Solo? Or mix with her rebellious friends? Well, you get the picture.

2-D ART

Judge: Joe Johnston, Art Director

First

LAURA HARVEY, Worcester, England, Age 15. Beauty and the Beast—acrylic

Second

DAMON MCCARTHY, Venice, California, Age 6. Wicket—pen and crayon

Third

VINCENT B. BONESKI, Bayonne, New Jersey, Age 15. Death Star Tour—pen and ink

Fourth

ROBBIE HARROLD, Narragin, W. Australia, Age 12. The Cantina—watercolor

Fifth

VALERIE GRANDT, Norfolk, Virginia, Age 31. "Splinter of the Mind's Eye"—color pencil illustration

Sixth

KRIS TIBOR, Napa, California, Age 17. ROTJ Bike Scene—color pencil

Seventh

JOHN MANOOGIAN III, Birmingham, Michigan, Age 5. Death Star Over Endor—crayon

Eighth

TIMOTHY BEITLER, Baden, Pennsylvania, Age 3½. Portraits—colored pens

Ninth

FABIANO DIAS, Rio de Janeiro, Brazil, Age 13. ROTJ one-sheet concept—colored pencil

Tenth

ROBERT SWAN, Napa, California, Age 34. Skywalker's—mural

Eleventh

MATTHEW SCHMIDT, San Diego, California, Age 4. Jabba's Court—colored pen

Twelfth

DEAN C. KOTZ, Danielsville, Pennsylvania, Age 9. ROTJ one-sheet concept—pen and watercolor

Thirteenth

MENI TSIRBAS, Chomedy Laval, Canada, Age 16. Cloning Castle Battle—pen and ink

Fourteenth

DAVID SAFRANYOS, Hamilton, Canada, Age 13. ROTJ Portfolio—colored pencils

Fifteenth

DOUGLAS MITCHELL-BURNS, Nairn, Scotland, Age 16. "Han Solo at Star's End" illustration—acrylics

2-D Art



3-D ART

Judge: Bill George, Modelmaker

First

ERIK MANN, Greenfield, Massachusetts, Age 9. Imperial Slime—sculpture

Second

PAUL A. EVERMAN III, Shawnee, Kansas, Age 16. Fenn Rhashan, Bounty Hunter—costume

Third

GARRETT FASANO, Downingtown, Pennsylvania, Age 16. Rancor—sculpture

Fourth

WILLIAM ALVAREZ, Norton, Massachusetts, Age 16. Lightsaber

Fifth

JEFF ASHBECK, Wisconsin Rapids, Wisconsin, Age 11. Jabba the Hutt—bread dough sculpture

Sixth

MARTY MCNEILL, Overland Park, Kansas, Age 12. New Blaster Design

Seventh

RICHARD SPRAGGE, Williamsville, New York, Age 26. Costume Replicas

Eighth

SANDRA CARLETON, London, England, Age 36. Ceramic Busts

Ninth

SCOTT PLANT, Ft. Wayne, Indiana, Age 21. Darth Vader—costume

Tenth

KERRILYNE BAUMANN, Scottsdale, Arizona, Age 12. Salacious Crumb—sculpture

Eleventh

JULIA DANIEL, Oak Park, Illinois, Age 14. Needlepoint

Twelfth

CORY EDWARDS, Columbus, Ohio, Age 15. Ewok—puppet

Thirteenth

ANTHONY LUCIANI, Tampa, Florida, Age 12. Boba Fett—costume

Fourteenth

PHOEBE K. MOSSEY, S. Yarmouth, Massachusetts, Age 31. Imperial Commander—costume

Fifteenth

CARL MARTIN, Berkeley, California, Age 8. STAR WARS Creatures—clay sculptures

First Place Literature



RELIEF IN GALAXY: SECOND DEATHSTAR DESTROYED

Like a big bang the SECOND DEATHSTAR exploded! The destruction was part of a big new plan which started on the moon of Endor. There a small group of rebels tried to blow up the station and prevent the evil emperor from attacking the Rebels. The Rebels were helped by the Jedi Master Yoda and his army of Ewoks. The Rebels were helped by the Jedi Master Yoda and his army of Ewoks. The Rebels were helped by the Jedi Master Yoda and his army of Ewoks.

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MODELS

Judge: Steve Gawley, Lorne Peterson, Model Shop Supervisors, ILM

First

HIROSHI OTSUBO, Oita, Japan, Age 16. Sand Skiff

Second

COLIN ARMITAGE, Leeds, England, Age 18. P.G. ADAMS, Leeds, England, Age 16. Special TIE Fighter—new design

Third

PAUL VANHULLE, Harelbehl, Belgium, Age 26. Jabba's Barge

Fourth

LYNDA PELLEY, Greenfield Park, Canada, Age 19. Death Star

Fifth

ROCKY BASSICK, Fairfield, Connecticut, Age 17. Speeder Bike

Sixth

RANDALL WRIGHT, Lafayette, Louisiana, Age 12. Speeder Bike

Seventh

ROBBIE GEORGE, Monroe, Louisiana, Age 11. Skiff

Eighth

SHAWN LUCERO, Marietta, Georgia, Age 9. TIE Fighter

Ninth

PAUL DENTON, Lewisville, Texas, Age 15. Y-wing

Tenth

KENNETH MILLER, Glendale, Arizona, Age 13. Skiff

Eleventh

MARK DANZ, Santa Rosa, California, Age 18. Miniatures

Twelfth

EUGENE KING, San Diego, California, Age 22. Bothan Spy Ship—new design

Thirteenth

A.S. NIKODEM, Glashutten, W. Germany, Age 12. Miniatures

Fourteenth

MELVILLE COHEN, Metairie, Louisiana, Age 37. X-wing

Fifteenth

BRYAN JOSEPH, Coraopolis, Pennsylvania, Age 27. Y-wing

First Place Literature

Jedi Rising, by Cheryl McDaniel and Ellen Mortimer

Although the Emperor is dead there are still pockets of Imperial resistance to be dealt with. The strongest is a group of Imperial governors who have banded together on the capital planet of Pendara. To free the galaxy the Rebels plan one more battle. Part of the plan involves the Ty Khetaran intelligence cell—a diverse group of people who possess the attributes which enable them to infiltrate the Imperial stronghold and set up the final destruction of the Empire.

Film

Illusion, by Steve Gibbons

A rebel soldier crashes his speeder on a desolate planet and heads off into the wilderness for help. Instead he finds himself attacked by ruffians and captured. As their leader approaches the captured Rebel he wakes to find it all an illusion.

SOUND

Judge: Fan Club Staff

First

NICOLE COURTNEY, Chicago, Illinois, Age 28, The Dark Lords of the Sith—radiodrama

Second

ABEL RODRIGUEZ, Corona, New York, Age 20, LOUIS GONZALES, Brooklyn, New York, Age 20, Mission Peril—radiodrama

Third

SUZANNE SHRELL, Ft. Worth, Texas, Age 21, Musical Portrait—piano

Fourth

VICKI SHARMAN, Winnepeg, Canada, Age 19, Princess Leia's Diary—tape

Fifth

DAVID RICH, Plainview, New York, Age 12, Battle of Kessel—radiodrama

Sixth

JASON BRADSHAW, Silver Creek, Georgia, Age 12, Fighting—Rebel song

Seventh

ANTHONY FREDERICO, N. Grafton, Massachusetts, Age 7, STAR WARS Story—new adventure

Eighth

MARK MOORE, Clinton, Ohio, Age 17, Mandrake: The Son of the Emperor—radiodrama

Ninth

DAVID RANSON, Poca, West Virginia, Age 15, Prepare to Return—radiodrama

Tenth

MINDI M. REID, Bellevue, Washington, Age 25, filksong

Eleventh

KATHRYN ZIEHM, Age 18, Maria Nokomis Age 18, CAROL FICK, Age 17, Simpsonville, S. Carolina, May the Farce Be With You—satire

Twelfth

STEVE LEE, Los Angeles, California, Age 18, STAR WARS Satire

Thirteenth

BRIAN COUCH, Louisville, Kentucky, Age 13, My Favorite Scenes—filksong

Fourteenth

PAUL MARCHBANKS, Clinton, Tennessee, Age 11, STAR WARS Medley—piano

Fifteenth

SEAN FREDERICKS, Waterloo, Iowa, Age 9, STAR WARS Medley—piano



3-D Art

MISCELLANEOUS

Judge: Fan Club Staff

First

ANDREA L. BUGASH, Red Lion, Pennsylvania, Age 14, Stick Figures—toy

Second

JASON PAWLOWSKY, Berwyn, Illinois, Age 10, Light Box—toy

Third

BARBARA WROBLEWSKI, Springfield, Massachusetts, Age 14, Jabba—the Stamp Dispenser

Fourth

CECELIA GAXIOLA, San Jose, California, Age 39, Sand Skiff Punch-Out Book

Fifth

JON PETERSON, Rocklin, California, Age 15, Computer Graphics Program

Sixth

RONALD KARPENKO, Shelton, Connecticut, Age 34, Scout Walker—toy

Seventh

CRAIG GUILLOU, Mississauga, Canada, Age 18, SW Stamp Set

Eighth

HEATHER BELL, Layton, Utah, Age 12, Gamorrean Guard Magnet

Ninth

MARY JEAN FJELLESTAD, Snohomich, Washington, Age 23, SW Cartoon

Tenth

MIKE GAINES, Colonia, New Jersey, Age 15, SW Video Game

Eleventh

MIKE NICHOLS, Canton, Illinois, Age 15, SW Video Game

Twelfth

ELIZABETH ADDISON, W. Palm Beach, Florida, Age 19, SW Business Cards

Thirteenth

DOUGLAS JAMES, Loveland, Colorado, Age 7, King Imperial—new creature

Fourteenth

ERIC BAILEY, Deweyville, Texas, Age 4, SW Vitamins—new idea

Fifteenth

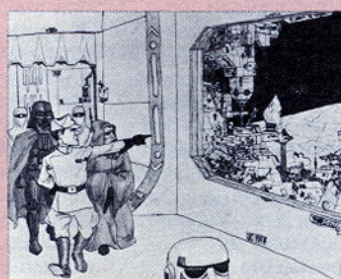
BARBARA RICCARDI, Age 35, SW Fun House Kit

That's All Folks! Ong Joe Jr., Philippines

THE EMPIRE STRIKES BACK, by Mike McKinnis

Mike McKinnis, using paper cutouts, re-creates the battle scene on Hoth with his film.

2-D Art



FILM

Judge: Fan Club Staff

First

JOHN RICHARDSON, Wayne, New Jersey, Age 18, Vader Knows Best

Second

STEVE GIBBONS, Lake Havasu, Arizona, Age 15, Illusion

Third

MIKE MCKINNIS, Milwaukee, Oregon, Age 14, THE EMPIRE STRIKES BACK

Fourth

ADAM SCHULTZ, Satellite Beach, Florida, Age 18, Too Much STAR WARS

Fifth

DAVID HENSLEY, Norwood, Ohio, Age 18, The Shaping of Adam

Sixth

TED DEWBERRY, Los Angeles, California, Age 14, The Opening of RETURN OF THE JEDI—documentary

Seventh

BILL DEIKER, Glendale Hts., Illinois, Age 17, RETURN OF THE JEDI Teaser

Eighth

LINDA STEELE, Bierton Aylesbury, England, Age 18, Rancor Pit Scene—recreation

Ninth

AMY GERBER, Reston, Virginia, Age 16, ANGELA FORD, Herndon, Virginia, Age 15, Adventures of STAR WARS Cookies

Tenth

KEITH BLOCKER, Aurora, Colorado, Age 12, STAR WARS Story

Eleventh

BRAD LUCINDO, Richardson, Texas, Age 12, STAR WARS Adventure

Twelfth

DEANNE SMITH, Corpus Christi, Texas, Age 13, Lucas' Love of Imagination

Thirteenth

MATTHEW BRENNER, Beverly Hills, California, Age 14, Imperial Troop Indoctrination

Fourteenth

BOB MACIAS, Bloomington, Illinois, Age 15, Endor Village—recreation

Fifteenth

ANDREW D. MEYERS, New York, New York, Age 21, Luke's Narrow Escape—recreation

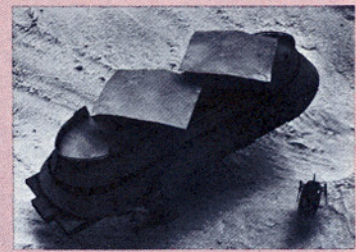
Miscellaneous



3-D Art



Models



Literature

Injustice, by Ann Raffel

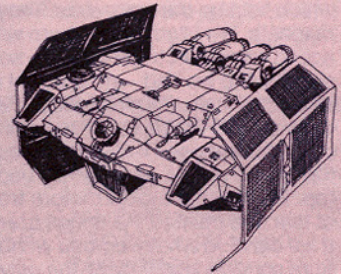
Sahim, the freshman Laatterian Senate representative, travels to the Old Republic's Senate Council to express his planet's concern over the industrialization of their system. Once arrived he is befriended by a young page, named Paul. From Paul he learns of the various injustices Palpatine plans for the galaxy, perhaps the worst being the discontinuation of the page program, the same program which begins the early training of future Jedi knights.

Sound

Mission Peril, by Abel Rodriguez and Louis Gonzales

Mission Peril tells the story of two Rebels who volunteer to infiltrate the Empire to obtain the Death Star plans.

Models



Miscellaneous



Literature

Evil Yet Lingers, by James Miller

"The defeat of the Galactic Empire in the Last Battle was a significant victory for the Forces of Good and many evil things left the universe in its passing, but evil still exists in many forms and some straggling traces of the Old Empire still existed. The Alliance began an effort to sweep the last remaining vestiges of Imperial tyranny from the galaxy. During this reconnaissance, the dark legacy of Darth Vader came to haunt the dreams of Luke and Leia Skywalker. . . ."



Ong Joe Jr.

It's a very light, honeycombed material consisting mainly of two thin layers of aluminum. We bought rejects from the airplane manufacturer. We weren't concerned about scratches because we were going to be sheeting it over with plastic anyway. We use a large variety of plastics—styrenes and urethanes. The Death Star surface was urethane foam—a combination of two chemicals which are mixed and poured in as a liquid; the mixture froths up like shaving cream, fills all the voids and then hardens. Many of the materials at this stage of construction are *extremely toxic*, and precautions are taken every step of the way.

SG: We had high-tech materials for some projects like *The Executor* and the Death Star, and for others we used very ordinary stuff—but in an extraordinary way. The final chase sequence of JEDI through the Death Star called for over three hundred feet of tunnels. We built them in eight-foot sections so we could deal with them, put them on wheels so they could be moved around, and made a lift-off ceiling which could be removed as the camera progressed down the trench. For the interior tubing and pipes we used cardboard tubes—like mailing tubes. These measured anywhere from two inches to two feet in diameter. We painted them with house paint. We must have used four or five miles of tubes. We also utilized about three miles of three-quarter inch lawn sprinkler pipe. We put plexiglass mirrors on all four sides of the tunnel to give the illusion of depth and make it look endless, and we lit it with about five hundred of

the two-foot fluorescent tube lights. It's sometimes funny when we go out and buy things. We go crazy in hardware stores. When we bought our tubing elbows from the building supply company, the guy said—"don't tell me, you're from Lucasfilm, right?"

When people think of modelmakers, they tend to think of models of spacecraft, but we do miniature sets of various sizes too. The reactor room was a miniature set. This was the room at the end of the Death Star tunnel. It was the big target for the good guys to hit. The *Falcon* was supposed to look like it was flying into the Grand Canyon. The reality was a twenty-four foot diameter circular set. The floor and ceiling was made up of fifty pie-shaped pieces. We made a master wedge-shaped pattern, and had the other forty-nine pieces duplicated from that. Here again we used some very ordinary materials. The master pattern was made up of fishing poles, the blank bamboo kind that taper down from the handle to the end. This gave it a great illusion of perspective, that Grand Canyon feeling.

Other kinds of miniature sets are the close-up sections of the conning towers of the Star Destroyer. We did a large version of a particular part of the spaceship so the camera could get real tight on it. Intercut it with the long shot, and it appears in the final version as if you are really close.

LP: The modelshop does a lot of moldmaking too. When we know we will need more than one of a particular model, we have to decide whether to make two models from scratch, or

make one model and then make molds from that master. Models built from scratch are often quite fragile. They have a lot of glued-on parts which tend to pop off when they're bumped; whereas parts that are molded of a homogeneous material are really quite durable. Our decision to go with models or molds has to do with which factors are most important on any given project—their cost, durability, and the uses they will be subjected to. If the model will be exploded in a battle scene, then of course we go to molds. Industrial designers do a lot of moldmaking, as do people with an art background in sculpture. It's often hard to find good moldmakers who have a combination of these two types of skills. Wesley Seeds and Sean Casey have backgrounds ideally suited to what we needed at ILM. They perfected a brittle wax technique using a glove mold which we used to make parts of the TIE fighters. Each part is delicate, but doesn't break until we want it to. The mold is made so that some of its parts have little trap doors which allow explosives and wires to be put in at the last minute, after the model is put together from the molded pieces.

SG: Sometimes the "time factor" is the only thing that dictates how a project should be approached.

LP: A tough "time factor" can breathe life into things. Or it can be terribly frustrating. *The Executor* had to be done in seven weeks. We worked seven days a week, 14-15 hours a day to get that done on schedule. During that time we had a bunch of boxes piled up in the back where

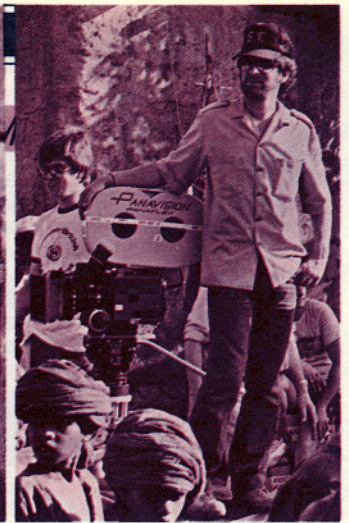
UPDATE: *Indiana Jones and the Temple of Doom*

After five months of filming 'round the world, principal photography was completed on September 8, 1983 for *INDIANA JONES AND THE TEMPLE OF DOOM*, the second cinematic adventure of the hero of the enormously popular Oscar winner: *RAIDERS OF THE LOST ARK*.

Filming of the action-packed drama set in the 1930's began on April 18, 1983 on location in lush and remote Sri Lanka and Macao; and later moved to the ingenious sets at EMI Elstree Studios near London. Immediately following the studio shoot, the first unit traveled to the United States for sequences shot at Lucasfilm's Marin County facility and other California locations including Hamilton Air Force Base and the American River outside Placerville.

Optical and special effects photography will continue at Lucasfilm's Industrial Light & Magic through March of 1984.

Harrison Ford again stars as Indiana Jones, the daring archeologist with the battered hat and lethal bullwhip. This adventure takes Jones and his unlikely companions, one of whom is a sassy nightclub singer named Willie Scott, played by Kate Capshaw, from the seedy backstreets of Shanghai to the open spaces of India; and from



a Maharajah's palace to the very jaws of death and destruction. On the way, they encounter jungle beasts, creepy crawlies, bloodthirsty assailants and an assortment of death-defying challenges. It's an action-packed adventure in the grand tradition!

INDIANA JONES AND THE TEMPLE OF DOOM is a Lucasfilm Ltd. Production, directed by Steven Spielberg, produced by Robert Watts, with George Lucas and Frank Marshall as Executive Producers and Kathleen Kennedy as Associate Producer.

INDIANA JONES AND THE TEMPLE OF DOOM is a Paramount Pictures release for May 25, 1984.

NEWS

Sidney Ganis, the Marketing Vice-President of Lucasfilm Ltd. known to Science Fiction Convention fans as "Sidney," has been chosen by the National Association of Theater Owners (NATO) to receive a 1983 NATO Chairman's Marketing Achievement Award. The Award recognizes the outstanding job Sidney Ganis has done in developing and implementing the marketing strategies for the *STAR WARS* trilogy and *RAIDERS OF THE LOST ARK* at Lucasfilm; as well as his previous work while with Warner Brothers.

one of our guys would go about once a night to kick them around and let off steam. We all learned a lot working on that model. Originally, Darth Vader's ship was to be the Star Destroyer; but George wanted a special ship, one with more identification. Long and spikey, with a different color, an entirely different look to it. We built it as an incomplete model so we wouldn't have to build as elaborate an armature. Camera shots of the ship were designed so that *The Executor* was shown only from the right side or up, or down; but never in the front or totally from the back. However, further down the line, shots were programmed for which the ship had to be mounted from the other sides. So we had to go back anyway and retro-fit. It's been our experience that if we don't do a model to the nth degree right off, we'll have to do it later on.

SG: Some things are just more fun to do than other things, whether or not you're pressed for time. We had a last minute insert shot on JEDI for which we had to come up with something quickly. An existing shot in the scene where R2 and 3PO fell off the bridge head first into the sand had to be adjusted so as to give the illusion of the skiff coming over to throw down magnets to pick up the droids. We had lost the magnets that were used on location shooting in the desert and we had to make some real fast. Looking around at lunch, I noticed these interesting shapes underneath the patio tables which hold up the umbrellas. They LOOKED like magnets. We filled two of them with water, added some electrical conduit, some vacuform shapes and we had—magnets! I really get a kick out of using found objects. When we were constructing the parts for the shield generator on Endor, we used large plastic cups glued on top of each other, and little pill cups stacked on top. We put little rocket motors from a kit on top of that and painted the things orange and silver. If we can find what we need without starting from scratch, and it looks the way we want it to, that's great. We have a certain way of looking at objects that someone else might throw away. It's part of the fun of making things.

LP: If I had to pick a model I enjoyed doing the most it would have to be Boba Fett's ship. *Slave I* was designed for EMPIRE by Nilo Rodis-Jamero. What inspired his design of the ship were the light pods that hang in the street. Everyone looks at them every day. On top of the column that goes up and arches over the street, the light has a little flanged bulgy thing that heads off to the nose. Well, if you take off one of those things and turn it on its side it looks something like *Slave I*. Of course the ship changed a lot from its original inspiration, but you can still recognize the origins. When I was building it we found a Porsche model kit, a monstrous 16" model, which just happened to be a model of a car I have, and had a lot of parts we could use on the prototype. The rear end of *Slave I* has the big fender parts and the Porsche's hatches and doors all incorporated into it. It tickled me to do that ship.

SG: Things have changed a lot over the years, since the first STAR WARS movie. Everytime you show a film to the moviegoing public you are educating them, making them expect more—so you're setting yourself to top your own efforts next time.

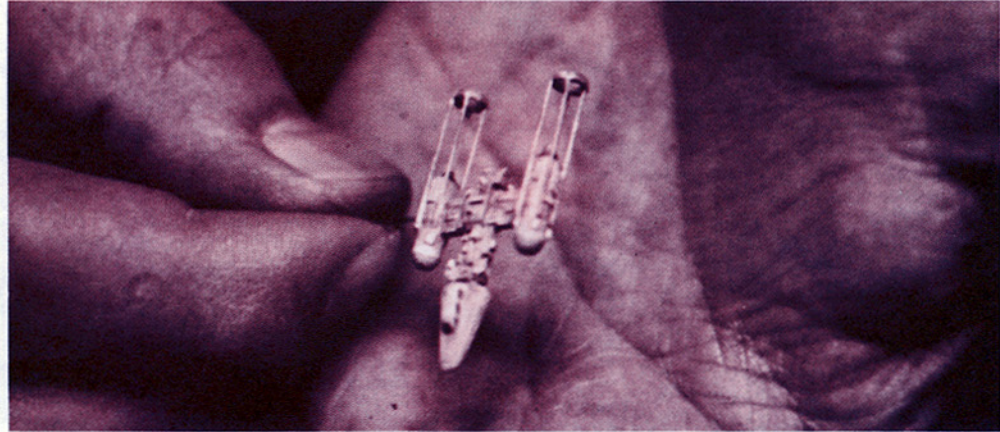
LP: It was okay after STAR WARS to have all space vehicles move faster and maneuver more dramatically—swooping, and coming in from different angles. From the start, EMPIRE



Steve Gawley working inside the reactor room, a miniature set built by the modelshop.



Lorne Peterson works on the 2 ft. Falcon.



A miniature Y-wing, one of the smaller models built for the Saga.

storyboarding was more exciting and dramatic than what came before.

SG: STAR WARS, though, is always going to be unique. No one had ever done that before. The challenge to the modelmakers on STAR WARS was really just to get the job done. We were trying to bring three dimensional reality to what George saw, his vision. In EMPIRE everyone was developing new techniques as they went along. A new kind of filming was used for the snow scenes which replaced bluescreening. What they learned on EMPIRE using stop-motion resulted in the development of go-motion which reduced the clickiness and jerkiness of movement in creature models. From each challenge you learn something you can add to your bag of tricks that will be the solution to a problem farther down the road.

LP: We had a disaster with a Star Destroyer on EMPIRE which we had to learn from very quickly. Like many others, this model was lighted using fiber optics. There was a light source at the center of the model, a bright hot light that faces into the end of the fibers channelling the light from the source to the clipped-off ends. If the cameramen don't turn on the cooling fans or hook up the cooling air which is piped in, the light source will get hotter and hotter until it melts all the fiber optics—and then the rest of the ship. One day it happened—the fiber optics were burned out on the Star Destroyer. It was absolutely necessary that it be filmed, and that the model stay on the stage since it was all set up for the shot. Luckily Paul Huston had built all these service panels in it that opened up so he could get at the problems to fix them. We built a bench for him so that he could work as comfortably as possible there on the stage, which he did, long into the night. Incidents like

that inspired Ease Oweyung to build hairdryer fans right into the engines along with the fiber optics, on all the models that were large enough. If the heating element is on, the fan is on. No more meltdowns.

SG: It does seem that the rising sophistication level from movie to movie is in technique, rather than in the look of the models themselves. JEDI is unique in that the complexity is amazing. The camera techniques, and the creativity behind the camera, provide what the audience sees in the final product. How a model enters a frame, all those brilliant moves. The Directors of Photography on this show, Muren, Ralston, and Edlund did quite a job. Everyone is building on everyone else's work. A lot of magic stuff is done in the optical department. The animation team adds laser fire. Then there are the sound effects. The challenge on JEDI seems to have been the amount of work there was to do. Just in terms of models we had one hundred seventy-five for JEDI as compared to about one hundred for STAR WARS and one hundred thirty for EMPIRE. Every model meant more of everything all the way down the line.

LP: Modelmakers now are much more aware of how the component parts interact, how they will all come together in the final product. From the start we have an idea of what we are heading toward as a whole. We are all involved in the team effort of tossing and blending and coming up with a good product. At ILM a lot of freedom and creativity is encouraged and expected. There is a more freewheeling approach to things. George has a clear idea of the overall picture, but we have a lot of creative input in specifics. My previous experience as a modelmaker in industrial design involved mostly

segments of a project and I found my rewards within that. Even back on STAR WARS I didn't have a clear idea of what we were heading towards. I was used to concentrating on the components. When I first saw STAR WARS at the screening; tears came into my eyes because the whole was so giant compared to the component parts I had concentrated on.

SG: STAR WARS was the first job I ever had. Before that I was in school. STAR WARS definitely continued the learning process. Most of the crew were rookies—never worked in films before. Our average age must have been about twenty-six, twenty-seven. We had guys from the electronics industry, industrial designers, machinists. It was all new to us. We were working out of a warehouse in Van Nuys. All the



Roberto McGrath
The Death Star tunnel.

money went into the show. They were building camera equipment and working out the bugs between shots. While we were working we saw only bits and pieces. We never saw any film. When I saw STAR WARS I couldn't believe I worked on the movie.

LP: I think most people at ILM would say that they have a lot of fun making movies. Even on days when I feel dragged out physically, I know that, soon down the road, someone is going to come up and breathe some life into the situation by asking me to do something that really challenges my abilities. That happens over and over again.

SG: The series has been very good to all of us. It's great to work here. George listens to ideas as well as coming up with them himself. We really participate in the film. It's a team effort. I don't know what to call what we do at the modelshop. Are we artists, technicians? What we do is take two-dimensional dreams and turn them into three-dimensional reality.

□ □ *Katherine Catalano*

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All member force numbers (except UK/Europe) will change with either the November or February issue of BT. The Rebel Alliance has kindly requested that we incorporate a new identification system which will improve Fan Club services. It will change whenever you move, thus making it easier for the Rebel Alliance to keep track of you. Please include this number, along with your full name and address whenever you write to us. Whenever possible, please enclose a SASE.

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Making of JEDI behind-the-scenes stories;
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