

1972

peillard

BOLEX REPORTER

Vol. 22 No. 1 1972

paillard

BOLEX REPORTER

Report to St. Patrick? by D. A. H. Stammer	3
The Super 8 Advantage by Tom Sullivan	5
The Latest in Moviemaking Comes From Bolex Super 8 Cameras and Projectors	6
Snake Wrestling and Filmmaking in the Amazon by Ted Rogalny	8
The Afternoon of a Nose by Bob Stuhmer	12
Filming in the Everglades by Robert C. Hermes	13
Copying Slides and Movie Frames by Ernst Wildi	17
New Variable Speed Motor for H-16 Cameras	18
Vario-Switar POE-4 Lens Offers Increased Versatility	19
No Second Takes by James M. Bu	20
How I Got "Come and Get It" by Jeffrey C. Ingram	21
"A Day at School" Writing a Screenplay for a Bolex 160 by Susan B. Vaughn	22
Assignment: Survival! by Chris Borden	23

The *Bolex Reporter* is published by Paillard Incorporated, 1900 Lower Road, Linden, New Jersey 07036. In the United States, the magazine is available twice a year through franchised Bolex Dealers at a price of 50 cents, or from the publisher on a subscription basis at \$2.00 per four issues. The editors will be pleased to consider original articles and photographs on movie-making. All manuscripts and photographs submitted become the property of the Paillard organization or its designees upon publication and payment at rate current. Copyright 1972, Paillard Incorporated, Linden, New Jersey.



A highly venomous *Varanus timoransis similis* bares its deadly fangs. Author D. A. H. Stammer shot this 16mm movie frame for his film series on Australian snakes and lizards.

REPORT TO ST. PATRICK?

by D. A. H. Stammer

Editor's Note: The author is an expert on Australian snakes and lizards, with over 20 years' experience filming them. Apart from making a series of films on snakes and lizards, he is also currently writing a book on reptiles and reptile filming. Inquiries are welcome and should be addressed to the author c/o Post Office Box 782, Mount Isa, Queens 4825, Australia.

Seven years, twenty-five thousand feet of film, perhaps a hundred thousand miles and seven or eight snake bites ago, I bought a Bolex H-16 camera.

None of the snake bites was inflicted by anything in the dangerous category, but by some of the smaller elapids (front-fanged venomous snakes other than vipers) or by pythons which, of course, are non-venomous.

My most recent bite was only last night when a ten-foot Amethyst, or Scrub, python demonstrated its dental armament in the fleshy area between the forefinger and thumb of my left hand. When my right hand moved in to the aid of its mate, it received exactly the same treatment. Multiple, though miniature, gashes caused a reasonably impressive flow of blood and made the demonstration an unqualified success in the eyes of a friend's three children. There was also an immediate and impressive swelling of the bitten area of the left hand, not so much in the case of the right.

The hundred thousand miles has been clocked in four different vehicles, one of which, an air-cooled, rear-engine vehicle, went through two motors in twenty-five thousand miles. It needed two motors because it was used as an all-purpose, go-anywhere wagon through miles of thick, powdery, air-filter-carburetor-choking, distributor-clogging, cylinder-reaming "bulldust," the local name for the stuff in North Western Queensland.

The footage has all been done on the one tough Bolex, which has had only one checking and cleaning. (Admittedly, the Bolex is kept in a plastic bag inside its case when in dry dusty areas.) The lenses are standard as fitted when pur-

chased, and include the Switar f/1.9, 75mm, the Switar f/1.1, 25mm and the Switar f/1.1, 16mm lenses. Accessories? A set of extension tubes and a matte box.

I am writing this at Cairns, about three-quarters of the way up Queensland's long East coastline. Yesterday at Townsville I bought some lengths of half-inch aluminum, an aluminum guttering corner and some 1/16-inch perspex sheeting. I'm going to make a perspex screen strengthened by the angling to which and through which I can mount the Bolex on a bracket made from the guttering corner.

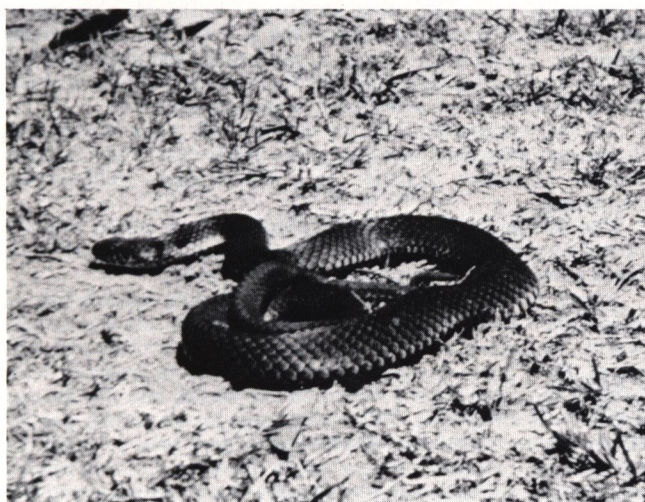
Of the major, that is the larger and more dangerous, Australian elapids, I have only two yet to film: the Common Brown (*Demasia textilis*) and the Taipan (*Oxyuranus scutellatus*).

The former is a very old acquaintance of mine, but the latter, fast and deadly, is quite new to me. The Taipan is the main reason for my being in the Cairns area.

Apart from the Sea Snakes, the elapids include all of Australia's dangerous snakes and all of the elapids of the world, including the cobras. We have more than our fair share. Our Tiger snake (*Notechis scutatis*) is credited with having the most potent venom in the world, but the Taipan is the most dangerous. With long fangs for an elapid, particularly for an Australian elapid, and a large reserve of highly toxic venom, its fatality rate before the advent of antivenene was within a whisker of 100 percent. Even since antivenene the fatality rate is by no means 100 percent reversed.

The Taipan is designed for a fast, long, accurate strike. From an average girth at mid-section, it tapers to a slender neck that accentuates its comparatively long head. Shy and actually retiring by nature (unless provoked), the Taipan is reputedly very fast and viciously aggressive when aroused or cornered.

Following the pattern of my films, I want to get good sequences of the Taipan's habitat and habits, close-up shots for identification purposes and its particular aggression/defense behavioural patterns. These later can, in many cases, be used as a method of identification just as idiosyncrasies of flight or territorial defense patterns among birds can be used in recognition. If possible, I want to get shots of the Taipan striking into the camera. Hence, the construction of the screen.



Various performers in author D. A. H. Stammer's film series on Australian snakes and lizards. Stammer uses a Bolex H-16 Rex and has been filming his subject for more than twenty years. Movie frames like these will also be used to illustrate a book to accompany Stammer's "reference book" collection of 16mm films.

My equipment is very basic, and accessories a minimum. Without a doubt the extension tubes are essentials; the really invaluable one is the No. 1. It is invariably, in fact, a permanent fixture, in position on the turret behind the 75mm Switar.

This may sound odd as it could well be thought that the telephoto lens would be the best lens to use. Certainly a telephoto is sometimes used with lizards, but rarely is it used

without the No. 1 extension tube in the case of snakes.

Then perhaps snakes require a different technique? I feel that they do!

My tripod, for instance, is very light by movie tripod standards and, not extended, allows the axis to be within 22 inches of the ground.

This is a useful working height for normal and wide-angle lenses, particularly in the case of the smaller snakes and lizards. More importantly, it is just the *right* height for the use of the telephoto lens with the No. 1 tube fitted for anything at ground level from almost immediately below the camera (i.e. with the Bolex tilted forward until the line of sight is vertical) to a point 16 inches out.

The minimum distance (and therefore maximum in-frame size) at which an object at ground level can be filmed in focus with the use of the No. 1 tube and the 75mm lens (distance setting 5 ft.) is $2\frac{1}{2}$ inches out from a point immediately below the lens where it points vertically downwards. The maximum distance (and minimum in-frame size) with distance setting infinity is 16 inches further out from that same point.

At these distances, of course, the areas frames are:

Minimum distance = Approx. $2" \times 1.45"$

Maximum distance = Approx. $3.1" \times 2.3"$ in the same plane as the film plane, or:

Approx. $3.1" \times 2.95"$ in the horizontal plane at ground level.

An area two inches by nearly one and a half inches is not very big. In fact, it is just the size of a matchbox. There are comparatively few Australian snakes' heads that would not fit into a matchbox. Only real giants of two or three species of elapids could not be framed in this area, and only real giants of two or three species of our pythons could not be framed adequately in the area covered at maximum distance of the coupled No. 1 tube and 75mm lens.

For head detail of many snakes (or lizards) this set up is, therefore, ideal. It is also ideal for other close-up work of feet or some detail work on body scalation.

The smallest of our lizards and snakes when young would fit into that matchbox, and a few adults, too, when curled. Close-up detail work on these might well entail the use of the No. 4 tube with the telephoto lens or even the coupling of the No. 4 tube with one or more others.

For close-up detail work many of my specimens are displayed in the hand. There are a number of obvious reasons for this, not the least of which is that it gives a standard for comparison of size. With the No. 1 tube and 75mm lens coupled, it is often possible to do the handholding and filming oneself. The visual impression is that of the viewer's hand holding the subject.

Generally speaking it can be said of the smaller lizards, at least, that with them it is either stop or go. No half-way measures because some of them are amazingly quick. The larger lizards, in many cases, are more inclined to turn on an aggressive looking bluff, which may not be all bluff if you approach them too closely!

A large San Goanna (i.e. monitor—*Varanus Gouldii*) is a joy to film or photograph. It grows to about five feet and is robustly built. A large one will go through his whole repertoire and it's quite impressive—often without budging from the one spot. Swelling out its throat, chest and stomach (with large forked tongue flicking in and out), it will scythe its powerful tail from side to side or hold it poised ready to one side and slowly and noisily exhaust its breath.

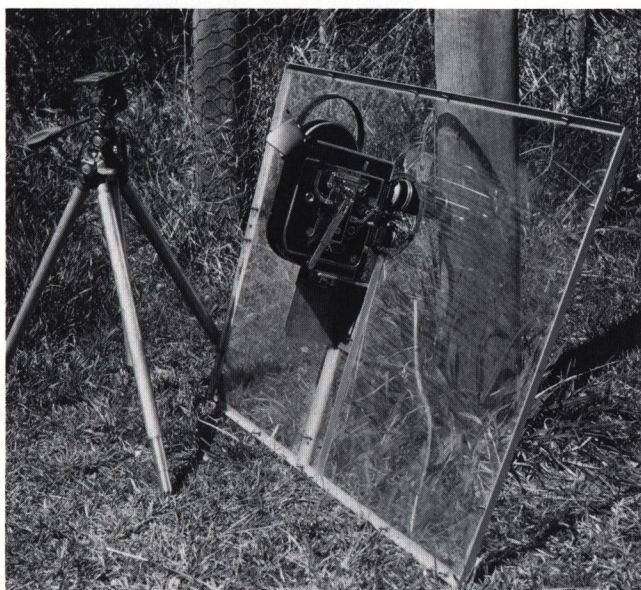
When it does move off, it will do so for a distance slowly and haughtily, still very much prepared. Then it will either belt off like an express train or relax and continue at a leisurely pace to do what it was probably going to do in the first place.

Snakes are an entirely different matter. None of our snakes is so fast that a fast walk will not keep up with it or a trot get away from it. However, all are masters in making use of cover and in disappearing, sometimes it would seem, into thin air. Their speed of bodily movements within their own length can be electrifyingly fast. There is, too, the consideration that, from the first moment of contact, death may be only five minutes away.

Because the camera must be completely mobile when filming snakes, a great deal of hand-holding is necessary. I can recall a total of perhaps five hundred feet of hand-holding the camera when filming lizards. The amount of hand-holding camera work when filming snakes is perhaps as much as fifty per cent of the total footage on snakes.

This includes hand-holding with the tripod still attached to the camera. The tripod I use is small enough and light enough to do this. It may sound cumbersome, but it is not. In fact, the tripod can be an aid to the stability of the camera in much the same way as a balance pole stabilizes the tight-rope walker. This is when the tripod is set at minimum height, its legs retracted and locked up.

Say, for instance, after fairly close-in sequences of a stationary snake have been taken with camera on tripod, the snake starts to move off. The simplest and most practical thing to do is simply to close and hold closed the tripod legs



Specially built safety screen permits close-up filming of striking venomous snakes with Bolex Rex. Lunging strikes provide dramatic footage, save filmmaker for another day.

and, with tilt and pan clamps unlocked, tuck the legs under the right wing and follow through with the snake uncoiling and moving off. The camera is operated by the right hand holding it and the tripod (like a pistol grip) with the right forefinger pressing the front release button—not a cable release.

The left hand is placed where it can steady things.

Or the sequence of the snake uncoiling and moving out of the picture can be completed on the tripod and then the above procedure of hand-holding can be used to pick up the snake again and follow its progression.

These examples are somewhat oversimplified and do not take into consideration changes of lens or angle or what the snake might do! But it is a basic part of the snake-filming technique. As mentioned, a snake filmed in the hand gives an indication of size, but the snake can also be manipulated to emphasize and demonstrate distinguishing features which may not otherwise be revealed by the camera.

For example, the bellies of all our larger and, therefore, dangerous Brown snakes are covered with pink to orange-red spots, and the scales under their tails (sub-caudal scales) are all in pairs. Members of the *Denisonia* family have all single sub-caudals, and the Black snake family (*Pseudechis*) has sub-caudals that normally start off singly and finish in pairs and so on. (It should be pointed out that Australian snakes are not the same as similarly named snakes in America, but belong in, most cases, to different families.)

So the hand-holding of both camera and snakes comes into the general technique of filming them. Perhaps the title of a series will explain the technique. It is simple: "Let's Have a Look at Australian Snakes." The Sub-titles are "1. Pythons,"

"2. Elapids (*Proteroglypha*)," "3. Colubrids a. *Opisthoglypha*," "3. Colubrids b. *Aglypha*," and "4. Typhlops (Blind snakes)."

The titles and sub-titles are very simply achieved. With the matte box attached to the camera one-third of the field of view is blanked off and an appropriate snake is filmed in the remaining two-thirds. The film is then wound back and the title or sub-title is filmed in the remaining third after the other two-thirds are blanked off.

My safety screen, 2'7" x 2', came in handy when I filmed a Common Brown snake (*Demansia textilis*) of just over five feet. Fast, alert and with a decided "no hanky-panky" attitude, it twice thumped into the screen. One of these long, lunging strikes is very satisfactorily on film.

I shall be back up there again soon and with hopes. Despite experiences to date in Taipan filming, I shall again use the screen for the next one! And, of course, the tough Bolex H-16.

THE SUPER 8 ADVANTAGE

by Tom Sullivan

Editor's Note: Tom Sullivan is no stranger to Reporter readers. As an active pro moviemaker, he has reported in recent issues on assignments stretching from Expo '70 in Osaka to a high school in Clifton, New Jersey. Here he offers four simple suggestions for "professional" Super 8 movies—even if you're a rank amateur.

If you are a Super 8 filmmaker, a recorder of home and family events, you may occasionally look at your own efforts on the family screen, then at the smooth flowing, professional films in the theaters or on television, and long to make your creations as satisfying.

It may come as a surprise to learn that the Bolex 160 Macrozoom camera, with a lens capable of filming without attachments from one inch to infinity, is a far more versatile camera than anything available to the professional cinematographer. Which means that putting smooth flowing, genuinely interesting and obviously entertaining images on your screen is merely a matter of technique, and with the Bolex 160 you actually have an unfair advantage.

With that camera and four simple rules, it is easy to turn out movies that will cause viewers to ask for more! Here are the rules:

1. Choose your shot carefully before aiming the camera.
2. Keep the camera steady and limit pans and other moves.
3. Keep scenes short—shorter than your usual!
4. Move in with the Macrozoom lens and fill your screen with the beauty of color and detail that is otherwise lost to the hasty viewer and careless filmmaker.

The first three rules are often stated, but for some reason, rarely followed.

A pro is rarely ever going to shoot a scene without having studied it. He wants to make sure he knows what it means in terms of the finished film, and with his audience in mind, he is going to shoot his wide views, the establishing shots, with an advance mental commitment to how he will fill them out with closer-in footage.

The Bolex 160 camera is specially designed for perfect balance; with very little practice anyone can hold it absolutely steady. Wobbly panning is the bane of the home movie screen, unless it contributes to the story—which it rarely ever does. So make the scenes stationary, using several viewpoints. If you want to establish the location over a broad scape, brace your arms against a convenient wall or parapet, or best of all, invest in a lightweight tripod. (The unique Bolex Minipod folds up neatly for maximum convenience, yet offers steady shots in a wide variety of locations.)

Continued on page 8



THE LATEST IN MOVIE MAKING COMES FROM BOLEX SUPER 8 CAMERAS AND PROJECTORS

Whatever your moviemaking pleasure, Bolex has a camera that's just right for you. From Macrozoom and the very latest Super 8 camera features, to mini-styling and the ultimate in Super 8 convenience, Bolex offers the most complete range of camera models.

Advanced amateurs will find Bolex Macrozoom models exceptionally versatile, loaded with valuable features like long zoom ratios, a choice of filming speeds, and super bright viewfinders. Weekend moviemakers will tuck a mini Bolex in their pockets for supersimple shooting on the spur of the moment. And in between there's a Bolex made just for the "almost-advanced" movie buff. Whatever your application—educational movies, nature shots, sports filming, or just plain home movies and vacation shooting—Bolex guarantees more fun with your camera.

You'll find the same kind of quality and reliability in the wide range of Bolex Super 8 projectors. From cartridge to reel to silent to sound, Bolex assures trouble-free projection of your favorite films.

The Bolex 280 Macrozoom

The Bolex 280 features an impressive 8 to 1 zoom ratio (from an extreme wide angle of 7mm to a long telephoto of 56mm) and the famous Bolex Macrozoom lens. With the Bolex 280, you can focus from infinity all the way down to the front element of the lens—no attachments and no special skills required! Shoot that long zoom at the football game; then capture a beautiful close-up of those flowers in

your garden at home. Both shots look sharp and crisp, filled with color, when you put them on the screen.

All you have to do with the Bolex 280 is point and shoot. Exposure is automatic, and there's a smooth two-speed power zoom to close in on distant subjects.

In fact, every kind of filming is ultra-simple with the sophisticated Bolex 280. Macrofilm extreme close-ups, titles, optical dissolves—all right on location. Shoot slides, post cards, make professional scene transitions simply. There's no editing required—you do it all right in the camera for first-time perfect films.

The Bolex 160 Macrozoom

Looking for all the fun of Macrozoom and an ideal camera design for super-steady hand-held shots? The Bolex 160 is specially built for exceptional camera balance, rock-steady movies. Film without accessories from infinity all the way down to one inch from the lens. Just focus and shoot. Power zoom and a zoom ratio from 8.5 to 30mm give you plenty of reach for those out-of-the-way shots.

Titles, special effects, and professional movie techniques are a natural for the Bolex 160. The camera even comes supplied with its own titling and effects device—a clever Multitrix—which invites you to turn everyday movies into really enjoyable film productions.

The Bolex 250 Macrozoom

The Bolex 250 gives you all the ruggedness and dependability of the most advanced Super 8 cameras with a special accent on economy. From a long 5 to 1 zoom to completely automatic exposure to power zoom to extra-bright viewing, the Bolex 250 offers all the important features you need to produce perfectly exposed, colorful movies.

And with the Bolex 250, moviemaking is completely automatic, totally reliable. Like all the Bolex Super 8 cameras, the Bolex 250 adjusts automatically to every Super 8 film—from 25 to 160 ASA. Use richly colored Kodachrome indoor/outdoor film, or drop in a cartridge of new Kodak Ektachrome 160 for bright movies indoors—without movie lights! You get advanced camera features plus small camera ease with the automatic Bolex 250.

The Bolex 233S Compact

The Bolex 233S Compact fits any pocket, any pocketbook! It's unbelievably small at only 3" high and 7" long—built to go anywhere, anytime for ultrasimple moviemaking. Put it in your pocket, drop it in your purse, tuck it in your briefcase. Or just slip it into the glove compartment. Store it on a bookshelf or in a desk drawer.

There's never been so much moviemaking in such a little package—at such a little price!

The Bolex 233S packs in the movies with a zoom lens, automatic electric eye exposure control, bright viewfinder, and simple focusing from four feet to infinity.

For the man on the go, now there's a camera that brings back big bright pictures at a moment's notice. No fuss. No bulky equipment. Just top-quality movies in the palm of your hand with the Bolex 233S Compact.

The Bolex Multimatic

The Bolex Multimatic—world's only Super 8 movie projector with a built-in cartridge changer. It's the "no hands" Bolex, because all you do is drop in the cartridges and sit back. The Multimatic does the rest—from projecting to re-winding to going on with the show. No more interruptions in your movie viewing. Just pop in a fresh supply of cartridges and let it run as long as you wish.

Slow motion. Reverse projection. Single frame viewing. They're all ready at the touch of a button. Extra-bright projection lamp even lets you project in a semi-lit room. Choose the zoom or fixed focal length lens that suits your need. Then leave the Multimatic out where you can start the show anytime. Handsome styling makes this revolutionary projector a natural for table top or bookshelf storage.

The Bolex 18-5L

Sturdy steel construction and solid compactness make the Bolex 18-5L the most rugged, reliable projector you can buy for your silent Super 8 films. That's why it's called the husky little "dependable." Whether you use it day in and day out, or just for special movie times, the Bolex 18-5L is built to take abuse.

And it's extra-simple for foolproof projection. All controls are located in one handy knob. There's even a socket to automatically control your room light, so you're never in the dark.

Best of all, the Bolex 18-5L offers exceptional versatility in Super 8 projection. Project at normal 18 f.p.s. or switch instantly to ultra-slow 5 f.p.s. Run your films forward or backward. The 18-5L holds big 400' reels too—with threading fully automatic all the way to the take-up reel.

The Bolex SM8 Sound Projector

Now anyone can be a big-time sound moviemaker with the Bolex SM8 Super 8 sound projector. It's as easy as using a tape recorder. Controls are arranged so that even a youngster can add sound to a family movie. Music, commentary, sound effects—they're all simple and quick.

With the Bolex SM8 you get superior sound reproduction and exceptionally bright screen images. Put up to 800 feet of film on one reel—52 minutes of uninterrupted viewing. The built-in speaker provides ample sound for even a large room. Plug in an auxiliary speaker simply for bigger productions.

Convert your silent films to "talkies" and bring them to life with the Bolex SM8.

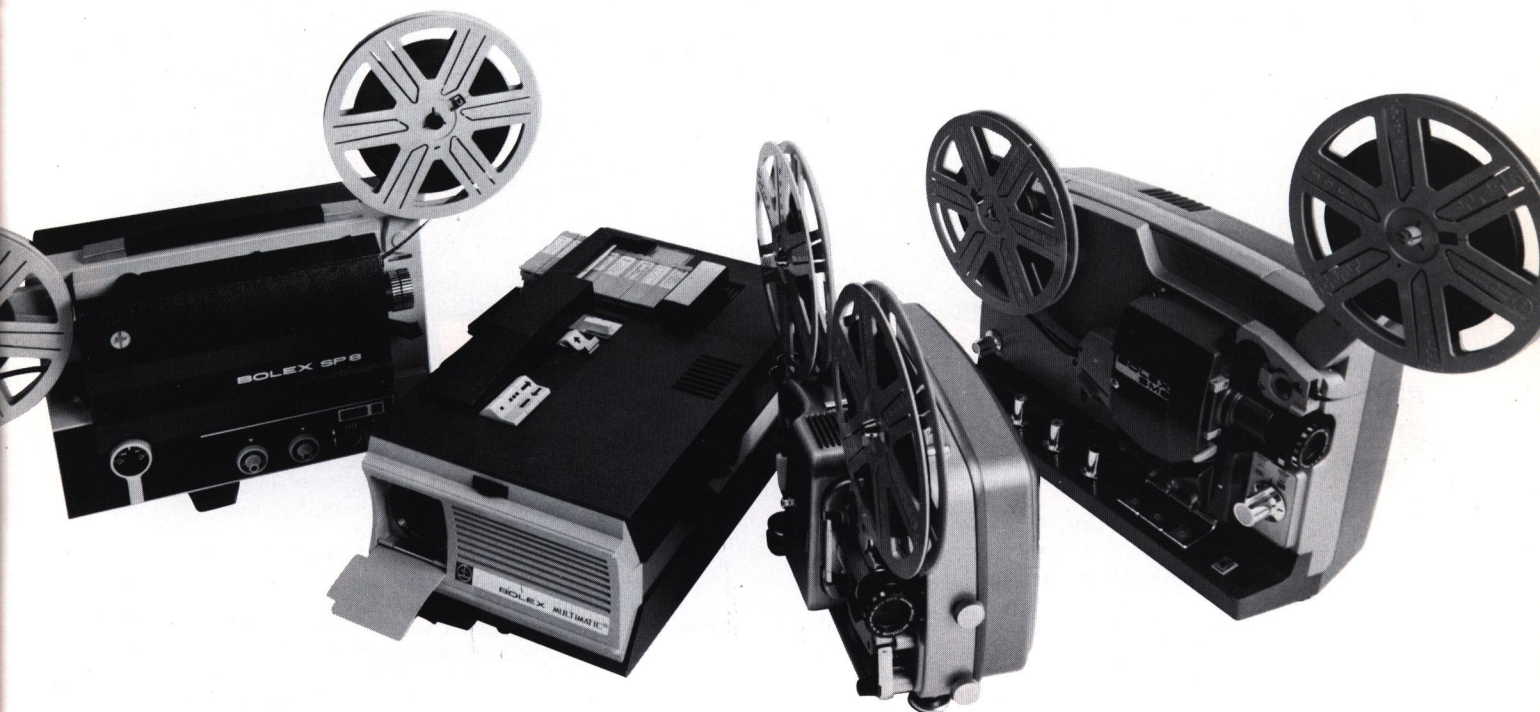
The Bolex SP8 Sound Projector

For top quality sound at an economical price, Bolex also offers the SP8 sound projector. You can record musical backgrounds, sound effects, voices—all right on your film in minutes. No special skills required!

A built-in recording mechanism gives you professional sounding films every time. And it's so simple anyone can do it—even on the first try! Controls are designed for maximum simplicity, ease.

Put up to 600 feet of film on one reel and enjoy bright, extra-clear screen images with rich, true sound. A zoom lens makes your SP8 perfect for any projection room. You can even plug in an auxiliary speaker for big-room sound needs.

Let your Super 8 movies sound off with either the Bolex SM8 or the Bolex SP8 sound projectors. Both are built to the Bolex standard of quality.



If you have an unlimited film budget, by all means make long scenes and when you tighten up the picture to show family and friends, cut out the excess and throw it away. If you don't have this fortunate cash position, keep those scenes short, and make a few more of them, moving in for closer views, making use of that versatile macrozoom lens.

Among my recent professional productions is coverage of a dolphin show in Florida. Most American filmers have similar scenes in their home library.

I have never been at a screening of that film where someone has not come up and said, "I never knew dolphins had teeth, especially that many," or, "Their skin seems quite smooth and rubbery."

One man even told me he ducked at one scene because the water splashes were so big and so sharp, he thought he would get wet.

There were no zooms in the film, yet the zoom lens was used to change the viewpoint between takes; and by pushing it to its limit, I was able to bring that big porpoise smile into a screen-filling scene that showed the rows of small, sharp teeth.

If I film an old castle, after its bulk is established in a post card long shot, and its massiveness is seen in closer views, its construction will be seen, too, in big close-ups of the masonry, the thickness of an individual wall, the huge weight of a heavy wrought hinge, the vast opening of the keyhole, perhaps a close-up of cornerstone legends.

Everyone has filmed the family in a tourist garden, but the careful filmer makes it alive and different by choosing

the different viewpoint, from low behind some stunning blooms, with that wonderful Macrozoom lens letting you show the flowers and the family reaction behind them.

Little statues in such places, when viewed from standing position, are not viewed at all. When filmed in close, they reveal details and character that will cause your viewers to say, "We were there and never saw those," or, "We've got to go there and see those."

If mechanical processes are involved, the big screen close-up is the stunner, with light highlights bouncing off polished components, and movements demonstrating rhythm and grace never obvious any other way.

Commonplace tourist views take on rare magic when you move your screen image in for the detail of gnarled hands fashioning embroidery, or picking grapes; or peculiarly local foods on a hotel or restaurant table. Look for the curl of steam over a food dish, the sparkle of wine into a crystal goblet, the heavy leather guest book, the ornate tile floor everyone walks on and never notices, the tiny flower blooming through a crack in a gray sidewalk of a dreary city, the rough tongue of a cow, the sparkling teeth of a Dutch or Swiss girl who guides you.

Establish the locale, move your viewpoint in close, keep the scenes short, think how they will fit together later, and bring back movies that don't bore your audience, because they involve him, and movies that will enhance your memories, because making them forces you to broaden your horizons to encompass the wonder of detail that is around us all the time.



SNAKE WRESTLING AND FILMMAKING IN THE AMAZON

by Ted Rogalny

Ice formed on the engine cowlings as we flew through the treacherous passes of the Andes Mountains. We were en route from Lima to Iquitos in Peru's Amazon Basin with a camera team from Eagle Motion Pictures on a filming expedition.

I stopped filming long enough to feed another roll of film into my favorite H-16 Bolex. The clouds had broken and the lighting was nearly perfect on side my of the plane.

Bob Taylor, Eagle's head cameraman, had also discovered the beautiful peaks of the Andes Mountains. His obvious confidence in the Vario Switar POE lens on his Bolex was almost scary. He concentrated completely on the viewfinder without a thought to exposure.

Stan Redding, a student, and I studied a map of the Amazon we would soon be traveling. We were going to film two primitive tribes of Indians I had encountered on an earlier trip. As a zoologist I would advise them on Amazon wildlife and hopefully gather a few reptiles for my own collection. Little did I know then that I would encounter on this trip one of the largest snakes in the world and do battle with him.

INSIDE THIS ELEGANT LITTLE CASE LIVES THE ULTIMATE SUPER 8 PROJECTOR

(Which may be why you've never seen it at your friendly local discount store.)

In Multimatic, we set out to create the finest Super 8 projector possible. Without compromise.

And once you see the Multimatic in action, we think you'll agree Bolex did it again.

The whole operation is based on the film cartridge: your hands never touch the film. Because the Multimatic gives you totally automated projection. Nonstop. (We happen to be the only Super 8 projector in the world that can.) It has a 6-reel (300 foot) capacity. That means you get 20 minutes of uninterrupted viewing. (More, really, because you can add new ones while a film is playing.) And, as each new film is shown, the one before it is rewound — automatically.

You can choose from 8 projection speeds (4 forward and 4 reverse) plus single frame freeze. And you can stop any film at any point and reject it. Multimatic offers brilliant lenses: either zoom or fixed-focus.

Our remarkable Bolex Multimatic isn't for everyone. Or for everyone's pocketbook. (Nor is Mercedes-Benz, or Rolex, or Dom Perignon 1959.) But isn't it nice to know that, when you are ready for the finest, Bolex took the trouble to make it for you?

For a full color catalog on the Multimatic and other Bolex Super 8 cameras and projectors, write: Paillard Incorporated, 1900 Lower Road, Linden, N.J. 07036.

For the ultimate projector, the ultimate film cartridge; it works. You play.



BOLEX

PAILLARD Other Products: Hasselblad cameras and accessories, Hermes typewriters and figuring machines.



Fully equipped and ready for a day's shooting with Bolex H-16 cameras.

Iquitos' lower streets were flooded. It was the rainy season, and the taxis and cars had been replaced by dug-out canoes. After buying the provisions necessary for our journey into the jungle, we selected two native interpreters to guide us.

As space and weight were critical, Bolex cameras were as much a necessity as a choice. Their dependability enabled us to keep our back-up equipment to a minimum, allowing us to travel light but without worry about equipment failure. By using two zoom lenses, the Pan Cinor 85-2 (17-85mm) and the Vario Switar 85 Compact (17-85mm), we were able to limit the number of fixed lenses to a handful and the camera bodies to three. We loaded and balanced our equipment and provisioned ourselves in the shaky craft, and by 3 p.m. we finally left Iquitos. We launched our dug-out into the mighty Amazon.

We made camp at nightfall on the banks of the river, stringing our hammocks to the trees and protecting ourselves from the persistent insect life with mosquito netting.

The next morning we found ourselves gliding silently across the flooded jungle floor while legions of squirrel monkeys and marmosettes traveled through the branches above us. We emerged into a beautiful black lake, edged with giant lily pads large enough for a human to stand on. In the distance we saw a small Indian boy, probably from the nearby Jivaro tribe, fishing from his dug-out with a spear. His face bore the characteristic red stripes of paint of his tribe. He skillfully and repeatedly hurled his primitive weapon into the dark waters. As we passed by we saw the trophies of his fishing skill.

The Jivaros are a colorful group of Ecuadorian Indians who adorn their heads and bodies with the bright plumage of toucans and macaws. These people plant no crops but reap a jungle harvest. They spend their days gathering roots and fruit and hunting mammals and birds with bows and arrows and blow guns. The darts used in their twelve-foot long blow pipes are tipped with curare, a poison that kills quickly, but does not spoil the game as food. The hunters lure the birds within range by imitating their whistling calls.

We established our own camp near the village and spent the next three days filming the Jivaros and their daily routine. Much of the men's time was spent weaving baskets as the women pulverized cassava root, a staple in the diet of most South American tribes. In the preparation of a certain dish, the women would hold a portion of the mixture in their mouths and later spit the soured batter back into the large bowl, thus producing a culinary delight that we politely refused to sample.

Music plays an important part in Jivaro activities. Flutes and drums produce a rhythmic melody to which the other members of the tribe stragely chant.

On the third day we left the Jivaro village and were on our way to visit the mysterious Yagua Indians. We were back in our large boat proceeding further downriver and passed simple thatched dwellings which dotted the banks. We were bound for the Yanamono River and the home of my old friend Senor Guerra. Here we would spend the night before journeying up the Yanamono to visit the Yaguas. Guerra's large house is built on stilts and lies at the junction of the

Amazon and Yanamono. He welcomed us that afternoon with a scarlet macaw perched on his arm while his pet wooly monkey played on the steps on his house. Over dinner Guerra said he would accompany us on our visit to the Yaguas.

The Yaguan village lies directly on the Yanamono River. The friendly Yaguas are truly red men for they paint their bodies with the juice of reddish berries. This dye is also used to color the strange, fibrous clothing they wear.

We heard the Yaguas' hollow log drums before we actually reached the village. Rounding a bend we saw two hunting parties returning to the village in their small canoes. We docked our boat, greeted our smiling hosts and watched—through our cameras—the preparation of a favorite tribal drink. As Ted and Bob filmed, I visited, through our interpreter, with two men.

The conversation turned to snakes in the area. They told me of a giant snake that lurked in a lagoon near their camp. The reptile had been seen by several members of the tribe and the Indians gave wide berth to this area. I suspected that they had seen an anaconda, an aquatic relative of the boa and resident of the Amazon basin.

The Anaconda resident is the world's largest snake. The Indians were not anxious to lead us to the lagoon, but gave Senor Guerra the necessary directions. I suggested to Ted



and Bob that we take the cameras and go looking for it, for if we actually did find the snake we could get some excellent footage. They agreed.

The next day Guerra and I took a dug-out and Bob and Ted followed in another. We were able to travel only part of the distance by dug-out, and soon it was necessary to wade through the shallow water. Reaching the exact spot where the Indians said they had seen the snake, we began carefully and quietly to search.

When I saw the Anaconda, I couldn't believe it. I had really not expected to find it. Only its head protruded from the brown water, and judging from the size of it, I estimated its length at about twelve feet. Although large, these snakes are not aggressive and are dangerous only when provoked.

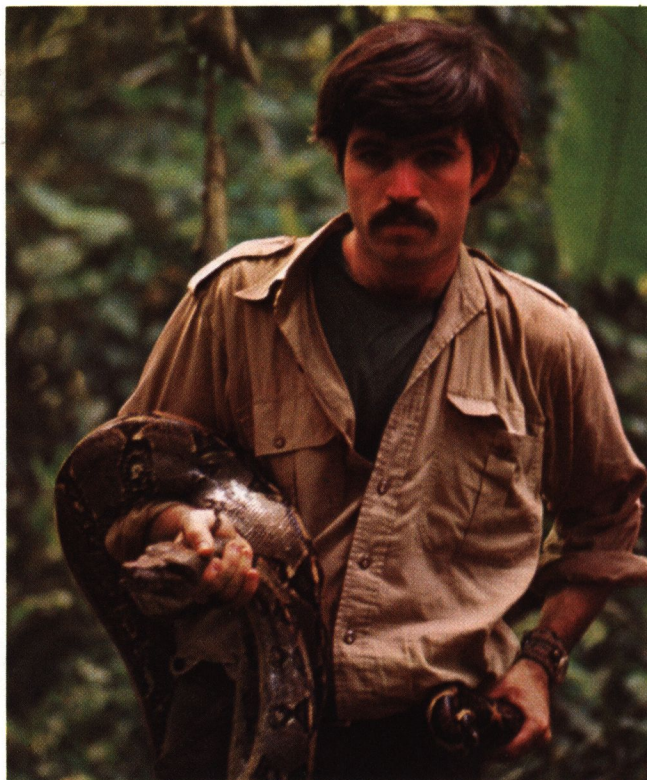
At this point, the water was slightly over our knees but our movement was impeded by the soft mud and submerged tree branches. I dove for the snake's head. The quick movement frightened it, and it retreated beneath the surface and began to swim away, so that instead of grabbing it behind the head I found myself gripping its body some three feet down from its head.

I stood up in the now waist-deep water and pulled the snake up to the surface. It swung its huge head around to bite, allowing me to get a firm grasp on the neck. It then coiled around my legs, and we both went under water.

Guerra now had a firm hold on the snake's tail, and after a long struggle that exhausted the three of us, we unwrapped the serpent, dragged it ashore and we put it in a burlap sack. I estimated the weight of this anaconda at about fifty-five pounds.

I released the olive-colored reptile into the lagoon from which it had come. The enjoyment of the contest was over. Taking the reptile from an environment where he is needed would not increase the pleasure. The anaconda footage had been a grand finale to a near perfect filming expedition.

The Bolex equipment functioned perfectly, and the weather had been good. We had worked hard, but knew that the footage we had would make it worthwhile. Ted was already planning another trip, but for the moment we could relax. We returned from this remote region of Peru with a film record of the Amazon, her forests, her wildlife and her painted faces.



Right: Animal handler Bill Thacker displays exhausted 15-foot Anaconda snake.

Below: Snake wrestling in the Amazon with Eagle Productions filming crew. Mighty Anaconda snake, which grows to be the world's largest, churns the water in a fury of foam.



THE AFTERNOON OF A NOSE

by Bob Stuhmer

If you were a nose, how would you spend your time on a sluggish, summer, Sunday afternoon? This ponderence has been perplexing the most respected psychologists since Dr. Sigmund Medulla theorized that the term "running nose" is derived from socio-political origins.

The structure of our permutable proboscis has long since been analyzed. There are long noses, short noses, pointy noses and fat noses (the last category is the result of sticking too much of one's nose into other people's business). Its function, too, is among the innumerable scientific principles included in the breadth of man's knowledge—or is it the knowledge of man's breath? But the psychological makeup of our provocative protrusion yet remains deep in an air of mystery and lore. For example, are those aggressive noses, nervous noses, schizophrenic noses? When Jimmy Durante says, "The nose knows" . . . does it really?

These were the complexities, the ambiguities with which I was confronted when I decided to do a film about the nose. Not being a licensed psychiatrist, I had little experience with the processes of the mind and its intricate patterns of thoughts and reactions. Therefore, I anticipated a great deal of trouble in analyzing exactly how a nose thinks.

Also, I had no way of testing my hypotheses, never having had the opportunity of meeting and exchanging ideas with a nose. I finally realized, however, that these limitations were actually quite beneficial. For these are problems that can be answered only by the imagination, and the filtering of the imagination through a great number of psychological laws can only result in the stifling of originally unlimited ideas. So, I just put myself in my nose's place—got ahead of myself, so to speak—and the outcome was a 3½-minute animation called "The Afternoon of a Nose," which has since been featured in five film festivals, is currently touring the country in a circuit, and has won the Grand Prize in a competition sponsored by the Nassau-Suffolk County Library System.

"The Afternoon of a Nose" is a surrealist film. It has no plot, simply because a lazy Sunday afternoon seldom does. It simply gives the nose—your nose, my nose—its rightful place at the head of our society. Many filmmakers who have viewed it have called it a visual ballet, for the movements of the objects on the screen are very smooth and calculated, with a deliberate slowness designed to establish a rhythm, a flow, a ballet.

The soundtrack, an excerpt from "Gayne Ballet Suite" by Khatchaturian, is also very serious and structured. In contrast, the actual antics of the nose are not only funny, but often even approach grossness. It floats through the air, drops leak out, it grows a long nose hair which becomes a vine and sprouts leaves which look like little noses.

I think it is this contrast that makes the film work. The actions seem funnier because of the serious format, and the classical structure assumes a more serious nature because of the continual absurdities. And they are both operating and united by the same music and style.

I began with a nebulous idea: that of emancipating the nose and granting it its deserved birthright. I mention this only because on certain occasions I will begin with a technique and then design an idea to promote it. I was positive about one fact, however; I did not want to plan the entire film in my mind before I executed the drawings. Instead, I wanted a feeling of spontaneity, as if the film could go in any number of directions at any given moment—almost the feeling one gets while watching the first half hour of a Perry Mason rerun.

I began drawing the animation cells with no idea of the eventual length or outcome of the film. Eleven-by-fourteen-

sheets of tracing paper were used rather than acetate because, with tracing paper, the entire scene including the background had to be redrawn with every cell. This gave a flickering, pulsating effect to the film's overall appearance that added to its life and spontaneity and that could not be achieved with acetate.

My registration board was simply a heavy piece of wood that I painted white and into which I inserted two ¼-inch dowels at the upper right and left hand corners, about a foot apart. I then used a standard paper punch to make a hole that was in register with the two dowels in each upper corner of my tracing paper cells. This way it was possible for me to introduce a blank cell over the one which I just finished drawing, and redraw the scene with those minor alterations necessary to introduce the illusion of movement. Because I was using tracing paper, I could see the image of the previous cell through the overlay, and could conveniently trace it and incorporate the changes.

I began the film during the first month of my junior year at Pratt Institute. I was then using a Bolex B-8 Regular eight camera for which the standard speed is eighteen f.p.s. To achieve the smooth flow of objects desired, I shot only two frames of each drawing, and thus required nine drawings per second of film.

The crudest of equipment was used—a standard tripod under which my registration board was positioned (having used the board to register each cell while drawing it, I could obviously use it to register them while shooting). I positioned two photofloods on the registration board to avoid any light spots.

Besides depending on the difference in position of each object to achieve motion on the screen, I also drew directly under the camera on certain cells, adding a little with each successive frame when I wanted something to form or grow on the screen.

After a full day of shooting, I sealed up the can of film with my chubby little hands and mailed it to that magic land at Fairlawn, New Jersey, confident that Kodak's darkroom wizardry would insure success. True to Eastman tradition, I received the film in all its dust-free glory. It was beautifully exposed, and the movement was definitely smooth. But I had made the mistake of introducing full-color and cutouts in the second half of the film, resulting in the destruction of the mood and flow. I had failed in my first attempt at glorifying the nose. I blew it.

By that time, my efforts had graduated to 16mm with optical sound, supplied by the famous Bolex H-16 Rex-4, which is built like a tank and can endure the tortures of a novice filmmaker.

Working in 16mm had the added advantage of enabling me to call all those 8mm films which didn't turn out too well—"test rolls." So I began the monumental project of re-shooting it in 16mm with a new ending. My first step was to produce fill-in drawings for the first half of the film, as the new format of 24 f.p.s. would cause the action to occur too quickly. That was shot on some footage left over from another project. Beautiful.

Encouraged by the success of the first half, I began drawing for the second. It was at this point that I discovered that the best procedure for completing a stack of drawings centered around staying up all night, a pencil in one hand and a glass of beer in the other. My only complaint was that I hadn't discovered this procedure before executing the drawings for the first half.

Because my tripod was not steady enough to support my Rex-4, I used the copy stand available in the film department at Pratt Institute, which was equipped with two quartz lamps supplying a total of 1300 watts of light.

This time I just shot the new ending, and again the film came back beautifully exposed, and again I didn't like it.

By the time the third ending, which I loved, was completed, I had a grand total of 1300 drawings. That's one drawing for every watt of light. That's also four brand new pencils, two cans of spray fixative and quite a few six-packs.

It took two days to shoot the complete film, which by this time I considered to be an epic. Of course, I also had the f.p.s. adjustment set for 64, which, when shooting single frames, tightens up the upper loop of film, and causes some

of the frames to be shot out of register. There weren't too many bad feelings, however, because I still noticed some rough spots where the timing needed reconsidering. I reconsidered. I shot it again with the final compensations. Success. Another six-pack.

The final week of its creation was spent in the recording

and syncing of the sound and the seemingly endless wait while the lab made a composite. The rest is history. Reactions have been extreme: some love it and some loathe it. But at least now, as the leading character in a film, the nose has finally been picked.



Female Anhinga, sometimes called the Water Turkey or Snake Bird, spreads its wings to dry in the sun. The giant bird lacks oil glands to waterproof its feathers.

FILMING IN THE EVERGLADES

by Robert C. Hermes

I am sure it has been the dream of many Bolex owners to make a little money on their investment or at least to see some of their film used on a commercial television program.

Natural history film may be the easiest way to accomplish this desire for it is a little too difficult and time consuming for staff television photographers to get.

Ever since drainage projects and the South Florida Jetport threatened to destroy the Everglades, this beautiful wild area has been the subject for television programs. Because I live in Homestead, Florida, next to the Everglades, and have filmed here for sixteen years, I could furnish much of the film for these programs. If you think you would like to try your camera on a natural history project I think I can give you a little information that will make the job a bit easier.

You will need a 16mm camera and a type of film that will copy satisfactorily. Today the standard in the industry is Kodak's Commercial Ektachrome Type 7252 with an ASA speed of 16. Eastman also manufactures a 64 ASA which I find too contrasty and a 164 ASA that is very satisfactory where a fast emulsion is necessary. Lately I have been experimenting with GAF D/64 and to my great surprise the footage I exposed was superior to Eastman's 7252.

If you intend to film wildlife, you will need telephoto lenses. I have them as long as 640mm, but these big Berthas

require a lot of skill to use and a heavy professional geared-head tripod that can cost you \$500. Every movement that you make with a telephoto lens is magnified. A movement of one foot with a 25mm lens is a movement of six feet with a 150mm lens. An almost unnoticeable jerk in a pan with a 25mm lens will be a calamity with a 150mm lens.

You will also find more blur in moving images on your telephoto shots. In ordinary filming the slight blur you will get on a moving animal is necessary to the sense of motion you are recording, but filmed with a 640mm lens the blur or movement is so great it cannot be accepted. Here your Bolex camera comes to the aid with a variable shutter. By closing the shutter you can shorten exposure and get less blur in your pictures without having to speed up your camera.

When you use a telephoto lens, reflex focusing is a must. Your focusing is much too critical to obtain by guesswork and your field of view so small it can only be accurately determined by viewing directly through the lens. When I use lenses of 300mm and larger, my problem is in finding my subject. With a 640mm lens I could spend an entire morning searching for my subject without ever finding it. This is why I have a four power rifle scope mounted on my camera base. The scope is adjusted to the field of my lens for a distance of 50 feet and it works very well from 30 feet to infinity, which is the area my lens will focus on. I find my subject in the big field of the rifle scope, center it on the cross hairs, and "presto" it is also in the focusing finder of my camera.

Telephoto lenses have more important functions than getting close pictures of a timid subject. Because of their smaller depth of field, you can easily get your background out of focus to a point where it becomes a solid flat color. This can transform a shot of a butterfly sipping nectar from a simple insect in a mixed jumble of vegetation to a bit of moving beauty free of all distracting surroundings.



Hunting with a camera is much like hunting with a gun, but far more difficult. Even with the largest telephotos you must get quite close to your subject. A hundred yards is about the maximum in my estimation. Beyond that distance the atmosphere deteriorates the image too much. With a gun you need only put a single shot into your victim, but with a movie camera you may need 400 pictures smoothly joined together by a movement so perfect that those pictures will not jiggle or jump when they are projected—and every picture must be in sharp focus!

I think every nature photographer honestly believes that some personal demon is constantly following him about with the sole purpose of thwarting his every effort. When the sun is shining, everything is quiet; but the moment it disappears behind a cloud the action really starts. Put a big

telephoto lens on your camera and the alligator catches a fish right under your nose.

That's why I'm a three camera man. I keep one Bolex mounted on a heavy geared-head tripod with a 300mm or longer telephoto screwed into the turret. A second Bolex is on a free-head tripod and has a 150mm or 200mm lens on the turret. The third camera is ready to be picked up and hand-held for close action. This camera is fitted with the Pan Cinor 17-85 compact zoom. Even with this set-up I can't get every shot, but I get fifty per cent more film than I can with a single camera. There's the added advantage of having 300 feet of film available without re-loading.

I like the Reflex Bolex that uses a hundred foot load and runs on a spring motor. This is the least complicated method of filming. I have on a few occasions lost the peak of an



action because the spring motor ran down, but the 16 foot run is usually very adequate.

With two cameras I have 32 feet of film available and can quickly capture action on two different focal lengths, which can be intercut to add interest to the shot.

I use a changing bag to load and unload cameras in the field, but I prefer to do this at home in my dark room. With three cameras fully loaded I seldom find that I run short of film for the day.

I have been asked how I managed to carry all this equipment about. My solution is a golf cart. I strap two heavy tripods where the bag is carried; the bags containing my cameras and lenses are slipped over the handle of the cart.

With this brief introduction to equipment, let's get out and do a little filming. There are two ways you can start

Alligator basking unobtrusively among the spatterdock, or yellow water lilies. A night hunter, this reptile is seldom active during the day.

your project. Write a script and follow this script closely, or travel about the area filming anything that you find interesting and then write your script.

For either method you will, of course, read and talk to local experts, Fish and Game, and Park personnel. Both the Park Service and the Fish and Game people hire a biologist who may give you valuable information. The latter are often especially helpful in telling you where the wildlife may be at the time you are ready to film.

Then there are those things only you can make decisions



Above: Great White Heron, found in the United States only in the southern tip of Florida.

Below: Author Robert C. Hermes captures stately Heron and a host of other Everglades inhabitants with a Bolex H-16 camera.



on: the reasons you are making this film. Do you wish to show how the Everglades is threatened by man? Will a story on the food chain have enough interest? Is your concern with the sheer beauty of patterns and movement, or will a bleak stark story of survival be more dramatic? Maybe a combination of all these ideas would make a better film but the length of a film will limit what you can tell. Trying to tell too much in too little time is as bad as boring your audience by taking too long to tell a story. I think the best way to put my ideas in an understandable way is to tell you how I work in the Everglades.

Actually the Everglades is a river that runs from Lake Okeechobee to Florida Bay. It is an unusual river, with an average depth of six inches, but in the rainy season it can be sixty miles wide in places. At times it looks like a shallow swamp with no noticeable movement in the water; often it divides into shallow grassy streams that flow through pine woods and cypress forests. Much of the river is filled with saw grass. The Indians called it "River of Grass."

The most noticeable changes in seasons in south Florida are the wet and dry periods. During the winter months it seldom rains. Everglades dry up except where man-made dykes are erected to store water. Even the deepest holes become only damp muddy areas dotted with tiny ponds. As the water levels drop, fish and other aquatic animals are forced into smaller and smaller areas. Egrets, ibis, rails, snakes, otters and many other predators collect at these ponds to feed. A small pond covering only five acres of land might be a seething mass of feeding creatures for three or four days—fish gobbling up fresh-water shrimp and smaller minnows, snakes eating fish, herons eating snakes, and possibly an alligator or two capturing an otter or larger bird for lunch. Any photographer lucky enough to be present at such an event will surely get some fine footage if he knows how and what to take.

Birds in flight are very exciting to film and when well photographed make dramatic pictures, especially when taken in slow motion. When filmed at normal 24 frames per second, the action will end too quickly and the images may be too blurred. I set my Bolex for 64 frames per second and use a 100 or 150mm lens. It is possible to hand-hold such shots and some photographers mount their cameras on a gun stock to film the action. I personally prefer my camera on a free-head tripod. All tension in the tilt and pan mechanism is free so I can operate rapidly and my tripod is carefully leveled to prevent sky lines being tipped. Determine where most of the birds are landing and pre-set the focus on your lens. Your job will be much easier with the 100mm lens, but images will be larger and more exciting if you can get them sharp with the 150mm.

If you can afford the film, try for footage with a 200 or 300mm lens. You cannot tell one white heron from another most of the time, so you can intercut different birds, and by doing this stretch out the arrival and landing of the bird into an exciting sequence. If you hope to sell your film, keep the camera running for a couple of seconds after the bird has landed. The extra film can then be used in a dissolve or fade in the edited production.

It's not an easy job to keep your bird centered and prevent it from dipping and jumping in your finder even when you film at high speeds. Don't get overcome by the beauty of the shot you are filming. Watch the smooth motion of your pan. Don't let the bird get ahead of you or fall behind. The time to admire your efforts is when you see the images projected on your screen.

Don't discard your failures too quickly. A little ingenuity may turn them into an exciting success. Somewhere in that bad shot you may have six or twelve inches of fine follow. After presenting an excellent shot or two, you might do a stirring melange of short clips—flights, landings, and acrobatics—to end your sequence in a flurry of action.

Most species of birds have special ways of feeding. Snowy egrets commonly fly close to the surface of a pond picking up minnows on the wing. Wood storks stand quietly or slowly walk about the pond with an open bill in the water. If a fish swims through the bill it closes like a trap. Roseate spoonbills seine the water waving their bills back and forth.

Then, too, individual birds exhibit interesting behavior

traits. I have filmed a common egret whose neck shook every time it spotted a fish. Most anhingas quietly spread their wings and tail to dry them in the sunshine, but one individual I photographed moved its wings in a circular motion while its tail moved up and down. Another bird shook its wings while every feather on its body vibrated. Comparing such an individual with others of its kind is interesting. Like people, birds develop habits which they follow even when there is no reason for the habit to be used. Anhingas, when they are moulting and have lost their wing feathers, still hold them up to dry. You will also find these birds spreading their wings in a pouring rain.

Notice how birds of different species seldom fight or quarrel but how members of the same species are having confrontations all the time. Many times threat postures serve to intimidate an enemy, but they may also be a prelude to an exciting fight. Learn the signs and be ready to start the camera. Certain individuals may be more aggressive than others. Pick them out and spend your time watching them.

Tying one sequence into another is very important. I strive to do this so smoothly that the viewer is not aware of a break. It's important that this change is varied. Never use any device so frequently that the viewer becomes aware of it. All your ingenuity must be used to keep your techniques from drawing attention from your story. For instance, you might change from a coot bathing to a heron bathing in order to get into a story about the heron. You might change from coots feeding in brackish water to coots feeding in fresh water in order to change from the mangrove areas to the fresh water ponds.

In telling a story of the heliconian butterfly, I followed it through metamorphosis to its life as an adult, its courtship, mating, roosting, etc. to the point where it was caught in a spider's web. At this point I continued with the story of the spider. Finally the spider was paralyzed by a wasp and dragged off to a nest in the ground. Here an egg was laid on the spider which was in a state of suspended animation. The wasp has discovered a substitute for refrigeration, for the paralyzed spider will remain alive until the egg hatches and the grub of the wasp feeds on its body. Here I could change again to other kinds of wasps or even continue with the fly that parasitizes the spider wasp.

One of the projects that was required in an Everglades film was a rain sequence. I took a few shots in the rain, but they were deadly dull and didn't even look as if it was raining. Anyway, it was winter in the Everglades and the dry season, so I resorted to a hose. The hose gave a better rain effect but it wasn't much like rain until I sped up the camera to 64 frames per second. Working against bright sunlight produced the beauty and sparkle I needed. I might have had to wait ten years for a chance to get such pictures naturally. If you want to simulate a storm, underexpose some cumulus clouds in the sky and film them in lapsetime photography, one or two pictures per second. In other words, when photographing the real thing doesn't work—improvise.

Another part of the project was to show the effects on animals in the rain. When I turned the hose on birds, they flew away. I did get shots of a tree frog and tree snail, both of which are lovers of rain, but the pictures held little interest. During a filming trip in the tropics several years ago I became acquainted with an expert studying wasps. One day he came to me with the exciting discovery that his wasps spent their time during a rain collecting moisture in their mouths, then going to the bottom of the nests dropped the moisture to the ground. After the shower he said their nest was quite dry. I tried the hose on a wasp nest in my own yard and lo and behold the wasps did a beautiful job of drying up the water. Maybe you saw the shots in a recent Everglades film on television.

If you decide to try filming nature in this wonderful area, do it the easy way. Don't slosh through miles of water to some isolated pond when you can get your pictures near a road. Very good areas have been made available in every park. The birds and animals are tamer here and more accustomed to people. You'll get better film here than anywhere else. Nature photography can be difficult enough without adding to your problems.

COPYING SLIDES AND MOVIE FRAMES

by Ernst Wildi

Filmmakers are often faced with a situation where they need or would like to include in their footage a scene which, for one reason or another, cannot be filmed. The desired scene is perhaps a faraway place, impossible or impractical to shoot directly with the camera; an event long passed; a building or other subject that does not exist any more. The required scene may be of a place where cameras are not permitted (inside a museum or historic house), or where there is insufficient light for filming (inside a church or cavern, or at Niagara Falls at night). The filmmaker can frequently find a solution by either purchasing commercial slides (readily available at all tourist attractions), or perhaps by shooting his own slides using electronic flash, or if the existing light is insufficient, a long time exposure.

Copying these slides on movie film afterwards is easy with a Bolex, and the results can be remarkably good, hardly distinguishable from true movie scenes, provided you have a slide of good quality without excessive contrast and washed out highlights.

Scenes from slides can be filmed in two ways. The slide can be projected on a screen with the motion picture camera set up to film the projected image. It is recommended to project the slide to a relatively small size (perhaps ten inches) and to use a piece of smooth white paper or cardboard as screen material rather than a regular projection screen.

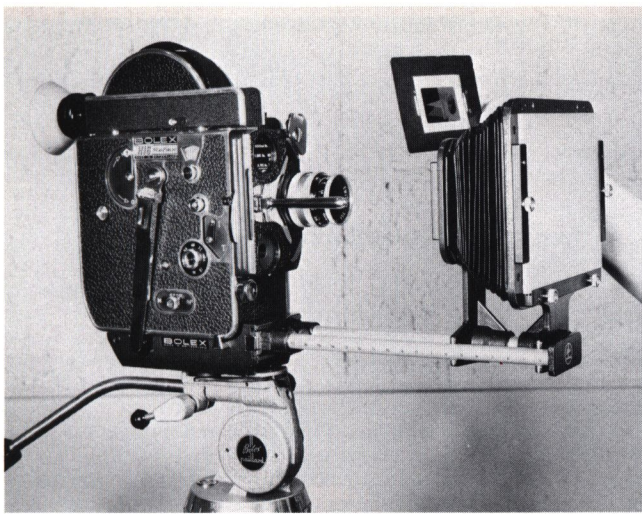
The screen size depends somewhat on the slide projector used; a bright projector may require a larger image to maintain details in the highlights. Adjust the image size until the image looks good with as much detail as possible in the shadows and highlights. Correct exposure can be obtained by pointing a reflected lightmeter or an automatic lens at the screen image. This projection method usually results in satisfactory 16mm scenes. It is also possible, however, for the screen pattern to show in the finished film, for the projection lamp to cause a color shift, or for edge sharpness to be unsatisfactory because of a poor projection lens. This method should be considered, therefore, only when it is not possible or practical to film the slide directly, as it may be with some lenses, especially zoom lenses that do not permit covering the small area of a 35mm slide.

For best quality, film the slide directly, which is easy with the proper lens equipment. For this purpose, the slide is lighted from the rear using a photographic light, such as a photoflood, sungun, or studio light balanced to the film (indoor film) in the camera. The light must be completely diffused; for this purpose an opal glass, a sheet of frosted acetate, or even a sheet of white paper should be placed one to three inches behind the transparency and between the light and transparency.

The transparency is mounted on a piece of cardboard with an opening the size of the slide. The purpose of this frame is not just to hold the transparency but to avoid unwanted light reaching the lens and flaring the image. Therefore, the outside of the cardboard must be large enough to shield all the light from hitting the lens directly.

The transparency can be filmed with a tripod-mounted camera just as if it were an ordinary close-up. A more practical arrangement exists when camera, slide and diffusion material are mounted on a common support such as a titler, with one titling frame holding the slide, the other the diffusing material. The most compact and practical accessory for this purpose is the Bolex matte box, where the slide can be mounted in the rear frame, the diffusing material in the front. The light is placed behind the entire "duplicating stand." The matte box is only satisfactory with short focal length lenses where the shooting distance to cover the slide

NEW VARIABLE SPEED MOTOR FOR H-16 CAMERAS



(or a desired portion of the slide) is not more than 6¼" for matte box #615, or 11" for matte box #617.

Exposure depends on the distance of the light from the diffusing material and is approximately f/4 for a #2 photo-flood in a reflector two feet behind the opal glass with an ASA 40 film in the camera. A reflected lightmeter, like the Bolex H meter, held in front of the transparency so it measures nothing but the backlight usually shows the correct setting, but a film test is recommended.

Instead of transparencies, a 16mm movie frame can also be copied with the same camera and lighting set. The slide is simply replaced with the 16mm frame mounted on a cardboard mask with the proper cut-out area.

The chart below shows what lenses can be used at what distances for copying 16mm frames and slides.

SLIDE	LENS	CLOSE-UP ACCESS.	DISTANCE, SLIDE- FILMPLANE
35mm	Switar 16mm	5mm ext. tube	3¾"
	Macro-Switar 26mm	5mm ext. tube	5¾"
Superslide 2¼ × 2¼"	Macro-Switar 26mm	5mm ext. tube	6¼"
	Switar 10mm Preset	None	4½"
	Macro-Switar 26mm	None	8"
16mm Frame	Macro-Switar 26mm	20 or 25mm ext. tube	4⅞"

NOTE: The square 2¼ and Superslides are cropped on top and bottom. 35mm slides are slightly cropped on the sides.

Freezing an Image

In this frequently used and effective professional technique, a subject is first seen completely stationary—as in a still photo—then it suddenly starts to move. Or the scene might open with normal movement then suddenly freeze for a few seconds, only to start moving again. The effect is very well known from televised sports events where a football player is stopped at the critical moment when he catches a ball, or throws a key block.

On television this effect is produced electronically; in motion pictures it is usually done in the laboratory by optically printing the chosen frame for the desired length of time.

The effect can be produced in the Bolex camera by copying the selected 16mm frame with the method described above. First pick the frame—it must be sharp—where the action is to freeze. If the scene is to open with a freeze, this would be the first frame. This frame is then copied for the desired length of the freeze, following the technique outlined above. The new freeze scene is then spliced into the original at the proper place.

To make the trick professional looking, exposure must match as closely as possible. Even more important, there must be no discernible displacement of the subjects between the original movement and the frozen sequence. Extremely accurate alignment of the camera so that it covers exactly the full 16mm frame area is a must.

Spring-wound H-16 cameras can now be equipped with the most modern, most versatile, most accurate, and most convenient electric motor drive available for 16mm filming.

The new Bolex ESM motor is modern because it is controlled electronically by the newest designs of circuitry and can be used for the most modern method of sync sound filming, wireless with crystal control.

It is versatile because it provides the filmmaker with a choice of filming speeds from 10 to 50 f.p.s. and thereby allows him to film long, uninterrupted scenes at all speeds, including 50 f.p.s. slowmotion. The same motor also permits the filmmaker to shoot sync sound at 24 or 25 f.p.s., and all these possibilities exist with 100' or 400' Bolex cameras.

The ESM motor is accurate because the electronic circuit controls the sync sound speeds of 24 and 25 f.p.s. with nearly perfect precision. When used with the crystal sync accessory, the lag is less than one frame in 400' of film.

The motor is convenient because it no longer requires carrying a separate power pack and thereby eliminates long cable connections. The 12V rechargeable, nickel cadmium battery is built into a beautifully designed grip which makes handheld filming with Bolex H-16 cameras a pleasure.

The Bolex ESM motor, which does not replace the existing, lower-priced, Unimotor and MST motor, but is an addition to the line, attaches to all spring-driven H-16 cameras with the one-frame shaft.

The ESM motor weighs about two pounds and has a cable connection for the take-up motor on the 400' magazine. It is used for handheld filming with a grip of the same type as used on the Bolex EBM camera. For tripod use, the motor-equipped camera with grip can be mounted on the tripod, or the grip can be removed and the battery placed in a battery container available as an accessory. Starting and stopping can be done with the switch built into the ESM motor or from the panhandle by means of a remote control



cable available as an accessory. Starting and stopping is practically instant, and it is therefore not necessary to cut out a large number of frames at the beginning and end of each scene.

Sync sound filming can be done with sync pulse generator or crystal sync unit, both of which are pocket-size, light weight accessories. For sync sound filming with the sync pulse generator, the ESM motor is set at 24 f.p.s. (25 f.p.s. in Europe), and the sync pulse generator is connected to the other 7-pin outlet on the ESM motor with a coiled cable (supplied with the sync pulse generator) going to the tape recorder.

The method of sync sound filming is the same as used on all professional cameras with a 60-cycle pulse recorded on the tape, and any tape recorder with sync pulse head can therefore be used. The ESM motor also has, built in, a relay



New Bolex ESM electronically-controlled variable speed motor comes equipped with battery, hand grip battery housing, battery charger, connecting cable. Not pictured are optional accessories: sync pulse generator, crystal sync, battery charging box.

for automatic slating of the film and tape. The slating lamps and connecting cable for the H-16 cameras are supplied with sync pulse generator. Automatic slating naturally requires an oscillator in the tape recorder.

For wireless sync sound filming with the crystal sync unit, the ESM motor is set to "Sync" and the sound recorded with a crystal-controlled tape recorder.

The Bolex ESM motor works at temperatures from 14 F. to 120 F., and a fully charged battery is sufficient for filming approximately 1600 feet of film. A charger is supplied with the motor drive.

Moviemakers preferring a camera with built-in motor drive will find the new Bolex EBM Electric ideal for filming convenience and versatility. The EBM combines light weight and compact design with rugged construction, reliable performance and professional picture quality and registration steadiness. It's the perfect camera for action and news filming.

The EBM features a built-in electric motor electronically controlled for variable speed filming from 10 to 50 f.p.s. as well as sync sound filming with sync pulse generator or crystal. This completely new Bolex H-16 concept of a built-in rather than attached electric motor drive makes the EBM Electric ideal in all cases where an electric drive is either necessary or desirable for a compact 100' capacity camera or a camera equipped with a 400' magazine. Motor power is generated by a small rechargeable 12V battery located in the handgrip, eliminating troublesome cable connections between camera and power source. A fully charged battery provides power for 2400 feet of film; a light at the rear of the camera indicates when the battery needs recharging.

The EBM Electric also features a rugged bayonet mount for accurate and solid mounting of both large, heavy zoom lenses and a wide range of fixed focal length lenses. Full details and specs available on request.

VARIO-SWITAR POE-4 LENS OFFERS INCREASED VERSATILITY

A wide selection of zoom lenses is available to the 16mm filmmaker, but there is only one such lens which combines:

- a long zoom range,
- a large aperture,
- a close focusing range.

light measuring through the lens for films up to 400 ASA, a choice of fully automatic, selective automatic or manual diaphragm setting,

automatic diaphragm pre-selection, power zoom or manual zoom, picture quality equal to fixed focal length lenses.

The lens that offers all this is the Vario Switar POE-4, now available in bayonet or screw mount for all Bolex H-16 reflex cameras.

The zoom range goes from 16mm all the way to 100mm which, combined with the close 4 foot minimum focusing distance, permits coverage of areas as small as $3\frac{1}{4}" \times 2\frac{1}{4}"$ without close-up accessory.

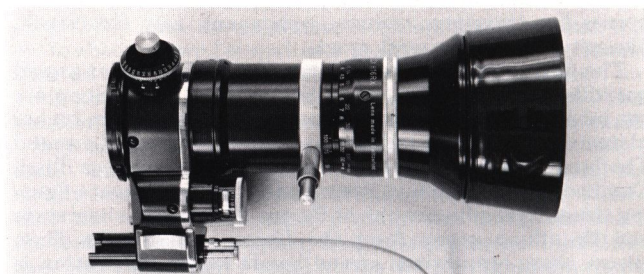
At the 4 foot distance, the filmmaker can zoom away from the small $3\frac{1}{4}" \times 2\frac{1}{4}"$ area to a wide angle coverage of $19\frac{1}{2}" \times 14"$, and he can do this with the manual zoom lever at any speed, or by using the power zoom, which takes from 4 to 6 seconds to cover the entire zoom range.

Powerzoom produces smooth, professional zooms and is a great convenience in handheld filming resulting in greatly increased camera steadiness. The power for the zoom comes from two small built-in RM-1 batteries.

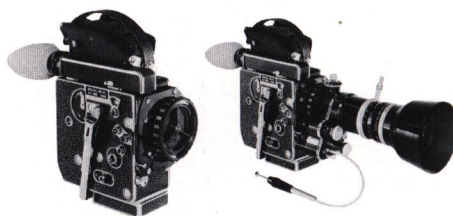
A close-up lens (engraved 2.3-3.7 feet) available as an accessory permits filming as close as 28" with a real macro area coverage of $1\frac{5}{8}" \times 1\frac{1}{8}"$ in the tele position and $9\frac{3}{4}" \times 7"$ in wide angle.

The maximum aperture is f/1.9 with image quality on the screen that looks every bit as good as that of a fixed focal length lens.

The light, measured through the lens, sets the diaphragm automatically and changes the aperture while filming, if necessary, thereby giving the filmmaker complete freedom in camera movement and instant readiness for filming.



Vario-Switar POE-4 16-100mm Automatic Zoom Lens for Bolex H-16 Reflex cameras.



The galvanometer changes the diaphragm instantly, thereby avoiding over or under-exposed portions when panning from light to dark or vice versa. The diaphragm can also be set manually or the automatic adjustment can be limited to any desired range of apertures, something not available on any other 16mm exposure system.

The meter is made for film sensitivities from 10 ASA all the way to 400 ASA, thereby covering the entire range of films normally used in 16mm cameras. It is adjustable for all of the camera's running speeds from 12 to 64 f.p.s. with a special marking, "E," for the EBM camera. The power for the metering system is supplied by a small, built-in PX-1 battery.

Automatic diaphragm pre-selection, an invaluable aid in handheld and tripod filming, lets the filmmaker open the diaphragm fully for focusing or checking the focus by simply depressing the camera release. The diaphragm automatically sets itself to the correct aperture before the camera starts running, and all this happens without the filmmaker having to remove his eye from the camera's reflex finder.

No other 16mm camera-and-lens combination can offer such automation, quality and convenience.

NO SECOND TAKES

by James M. Bu

Editor's Note: As a professional moviemaker and staff member at the United Nations Film Library, James Bu, a Burmese, is internationally oriented. He explains just how to meet the challenges of no second takes in a locale where first shot footage is always final footage.

It was early in the month of June, 1970, that I began to make an intensive preparation for my filming trip to South-east Asia. My preparation involved spending a lot of time reaching a final decision on the 16mm camera I should take with me. I had to take various factors into consideration, such as the geographical location, the time and weather conditions, the type of filming, the situation prevailing in the area of filming, and finally the availability of any facility for recharging the battery to run the camera. I projected myself into all those situations I would possibly encounter. One of the most important requirements was the ability of the camera to take pictures with or without battery power.

My project was entirely self-assigned and self-financed on a small budget of \$7000.00. This \$7000 covered all the expenses for traveling, camera, equipment, raw film stock, film processing and a work print.

The film to be made was about a group of dissident armed guerrillas known as the "Shan State Army." The Shan are the inhabitants of the northeastern and southeastern higher plateaus of the Union of Burma, bordering China, Laos and Thailand. They belong to the same ethnic group as Thai, Cambodian, Laotian and Vietnamese. These Shan are fighting the central government of Burma to separate their state and its ethnic group from the Union. Besides the Shan group, there are various armed bands whose motivation is profit making by running guns and trafficking opium.

My main purpose on this filming trip was to introduce myself to the challenge of making such a film in the jungle under hazardous conditions, as well as to bring the subject to the attention of the TV audiences in the U.S., audiences whose attentions are being focused only on such places as Vietnam, Laos and Cambodia.

The geographical location of this area looks somewhat like a triangle and is also known as the so-called "Golden Triangle," where the boundaries of Burma, Laos and Thailand meet one another. None of the three governments really exercises much authority in this area, for various reasons. It is believed that a very large percentage of opium used for making heroin to be circulated in the world passes through this area every year.

Past experience convinced me that there would be no second take and no time for coming out to recharge the battery should it run down. I went through four types of 16mm cameras and finally I decided to take a Bolex Rex-5. My very simple reason for selecting Bolex Rex-5 from much more expensive cameras was based on the fact that Bolex is the only 16mm camera available anywhere which has both spring wound and electric motor adaptability, so indispensable when power runs down and you have no means to recharge the battery. Also the reflex viewing for accurate framing and focusing and automatic threading, which saves tremendous time when reloading in a hurry and under pressure, counted for a great deal. Moreover, sync sound filming is not a problem with the MST motor and the Uher Pilotone tape recorder, which I took along with me.

After the Bolex Rex-5 decision was made, I sent a telegram to the Paillard factory in Switzerland and asked that they deliver the camera body, two 400 foot magazines, a take-up motor, one MST motor and two 12V rechargeable batteries to Ritschard & Co. in Geneva, where I would stop by and pick them up. In a hurry, I forgot to include in my telegram

to Paillard a connecting cable for the take-up motor, I discovered that only on my arrival in Bangkok when I checked the camera. I immediately sent a telegram to Paillard from Bangkok, asking them to rush me the connecting cable. The Paillard people are as reliable as their products. In five days I received the connecting cable via airmail.

I took my four lenses with me from New York. I had these lenses with me about a year and a half when I bought my second Bolex Rex-4, which I later sold to a friend. I kept the lenses with the intention of purchasing a new Bolex Rex body when I had a chance, and the chance came for me on this trip. Three of the four standard fixed focal lenses were macro Switars, all with the pre-set diaphragm device, which is extremely useful in opening up the diaphragm to maximum aperture without removing your eye from the eye piece. The other lens was a 17-85mm Pan Cinor Compact zoom, which I used in combination with the ultra fast 26mm Switar f/1.1 and 10mm f/1.6.

The color resolution obtained from the use of Switar lenses is unquestionably the best. Color reproduction from original film shot with Switar lenses is very close to the original subject filmed; no wonder NASA uses Switar lenses on Apollo moon landing missions.

I arrived in Bangkok, the capital of Thailand, on the 12th of June, accompanied by a Bolex Rex-5 packed in a



foam lined aluminum case, a Uher pilotone tape recorder and 8000 foot of Ektachrome 7242. It was the rainy season in Southeast Asia, and it rained almost every day in Bangkok. After a week's stay I continued my journey by train to Chiangmai, a city in northern Thailand. I was there joined by three persons. One of them later became my assistant until the end of the project. He was extremely useful. It was amazing that this person had never in his life used any camera, still or movie, and yet in a very short time he was able to do such things as load 400 foot magazines in the loading bag, thread the camera, read the exposure meter, operate the tape recorder, and even run the camera.

I stayed in Chiangmai for three days while negotiating with the people who have contact with the group in the area of proposed filming. I also bought three U.S. army knapsacks for use in transporting the equipment when I was told that the remaining part of the journey would be on foot for a duration of three days after riding in a jeep for six hours from Chiangmai. Before packing the equipment into the knapsacks, I gave a final check on every item. I also had the two power packs charged for eighteen hours so that I would have fully charged batteries for sync sound filming. The next day I hired a jeep and it took us as far as to the foot of the mountain, where we would begin the journey on foot. We had to climb the mountain almost the whole day before we started to descend along the slippery muddy track. We finally reached the stream and kept on walking along the stream until we came to a village, where we hired a mule to carry our equipment. The rain never stopped; in fact it

rained until I returned to Chiangmai.

The Bolex was given a tremendous beating and it was amazing that it did not fail. For instance, I fell twice from the muddy slope with the camera in my hand. After washing off the mud and sand, I kept the camera running. The humidity in the jungle was terrific and yet I did not encounter any problem with fungus, which is the usual case in the tropical shooting. I did not carry any dissiccant in my camera case to absorb the moisture. The MST motor did not give any trouble; I exposed about 4000 feet of sync sound and 3000 feet of silent film. I used the spring motor frequently in order to conserve the power supply; here the Bolex Rex spring wound capability really came in handy.

Almost all of the footage I exposed was usable, and my satisfaction with Bolex Rex-5 was 100%. I only regret that I did not take a Switar POE zoom lens with me; it would have saved me a lot of time with exposure problems. My kind of shooting doesn't permit the use of an exposure meter freely, which is often true for all news types of coverage. It is absolutely necessary that you have an automatic exposure system to get better results when filming the actions that are uncontrolled. Of course, there are some pitfalls which lay in the use of an automatic exposure lens, but with the Switar POE auto exposure lens you can overcome these pitfalls you would normally find in the other automatic lenses. Maybe professional cameramen are reluctant to rely on the automatic lens; they may also tend to feel that the use of automatic lens would make them look amateurish and perhaps jeopardize their professional standing. I am certain any professional cameraman who has used Switar POE will dispel that notion.

I have a very discriminating taste when it comes to the automatic exposure system. I have used and tested various automatic exposure lenses on all known Super 8 and a few available 16mm lenses. They all have the same problem with back-lighting; and when changing from light to dark shadow you end up with over and under-exposure due to the closing down and opening up of the diaphragm (electric eye). In the case of the Switar POE zoom auto lens, it is different. This lens has a very ingenious device built into it which enables you to limit the diaphragm movement within the range desired and thus makes this lens the most versatile automatic lens. The reaction of the lens to the change of light is smooth and almost unnoticeable. It is much faster and smoother than a servo motor control auto-diaphragm. Moreover, the true color rendition of this POE lens is absolutely consistent from one focal length to another.

At the moment I am in the process of planning another similar trip, but more ambitious. It will probably be in 1973. My equipment will be my present Rex-5 and a Bolex EBM Electric camera which I am purchasing soon. I will use my Rex-5 as a back-up camera. In my opinion the Bolex Rex and EBM Electric cameras are the best money can buy.

For compactness and maneuverability, without sacrificing professional quality, use the Bolex Rex and EBM Electric. You will perhaps discover something new you haven't yet come across.

HOW I GOT "COME AND GET IT"

by Jeffrey C. Ingram

It all started when I found myself hunting around in an old bargain center. You can always find me at these kinds of places—on the lookout for a sharp deal. I usually manage to come home with something, even though it will just sit on the shelf collecting dust. But this time it was different—there it was! Between an old 1947 set of the World Book Encyclopedia and a mound of broken Indian pottery, lay

80 rolls of outdated 16mm Kodachrome II complete with processing mailers! As I quickly covered up the film with a dirty tablecloth that was lying nearby, I asked the owner how much he wanted. He proceeded to tell me how much it was worth, and that even though it was only 17 years old it was probably still good. (He didn't know that the processing was free.) He said eighty, and I said twenty. I got it for twenty.

By the time I got it all home, I realized what a good deal I had actually made. I bought over 400 dollars of processing for only 20 dollars! And if by some slight miracle the film would still be useable, I had gotten over a thousand dollars worth!

As I came through the door, my parents who are somewhat skeptical of the bargains that I bring home, started to give me the icy stare that I am used to by now.

"What in the hell do you think you're going to do with all of that film?" asked my dad, trying to make me feel like a stupid kid who had just bought the Brooklyn Bridge.

He had a point, I didn't really know what I was going to do with all that film. At least not until that night, when I saw a rerun of Bruce Brown's famous surf film, "Evolution". I would produce my own surfing documentary! Who knows, if I shot enough, and had a good story, I might make one good enough to show to an audience!

First I had to test the quality of the film. I ran off a few rolls, and mailed them in. When I got the film back, I noticed green splotches all over the darker parts of the film, as well as a somewhat grainier quality than I had been normally accustomed to with Kodachrome II.

I took up this problem with the natives at the local camera shop. They gave me an almost colorless blue filter, and told me to shoot at two f stops lower than normal. After following their advice, I had no trouble with the quality of color, but I still noticed that the film was grainy. Anyway, I knew that the film would suit my purpose just as well as new film would.

My next problem would be picking out equipment. I didn't know the first thing about 16mm equipment, but luckily I had a friend who did. While talking to him, I noticed that just about every other word he was using was Bolex. He told me about the quiet, long running motor that Bolex had. He told me that I could have a 400 foot magazine model if I wanted. He also told me about the reflex viewing that would be an absolute necessity for shooting closeup. In fact, he took me over to a camera shop and picked out the equipment for me. Before I left, I had bought a Bolex H-16 and a Pan Cinor 12-85mm zoom lens.

Even with the surprising low cost of the Bolex equipment, I had still spent my last nickel on it, so, as we left Santa Barbara for Santa Cruz, I was completely penniless! All I had was my surfboard, my sleeping bag, 40 rolls of film, and my Bolex H-16, which gave me something to play with on the way up.

I shot 600 feet of film in the 6 hours that it takes to drive from Santa Barbara to Santa Cruz. This was my first real chance to use the Bolex before we came to the irreplaceable parts of the film, surfing in Santa Cruz.

On the way up, I speeded up parts of the film by shooting at 8 frames per second. When projected at normal speed, this footage looked quite good, and always managed to get a laugh.

After we had gotten to Santa Cruz, we immediately went in surfing. We didn't stay in very long, because the water was only 51 degrees, and that is cold for someone in from Santa Barbara, where the water is a warm 67. The first day, I got some good footage of Pleasure Point, which was breaking about 6 feet. I tried to do some slow motion work by filming at 64 frames per second, and I filmed one of the beautiful Santa Cruz sunsets.

Everywhere we went, we met all kinds of people. We were all pretty thankful that we had our Bolex along, because it was usually the object of the conversation. We had some model releases printed in Santa Barbara, which also helped to give an added bit of prestige. Surfers would invite us to some of their parties and spend all day driving up and down the coast, looking for that perfect wave. Then they would invite us to stay for the night, which really helped us save what little money we had.



Scenes reproduced directly from 16mm movie frames shot on 17-year old film stock by author Jeffrey C. Ingram with a Bolex H-16 camera.

Santa Cruz is a young community; the people there are the friendliest people in the world. Santa Cruz is mixed with the young at heart of almost every conceivable nationality and age. The average temperature when we stayed there was a perfect 65 degrees, and the sun shone every day. You can go to the world's greatest boardwalk, surf, go walking along the beautiful rocky coastline that is a photographer's paradise, or do and see any of the thousands of things. There is a mission, a redwood forest, and a University of California, all less than five miles from the many miles of beautiful beaches of Santa Cruz. The sand there is a pearly white, almost the kind that you would expect to find on some South Sea island.

We found a hippie-style coffee shop that was as much a part of Santa Cruz as its beaches. There was to be a show there one night happening everywhere at once. It would be too dark for the film that I had, so I talked my friends into buying me two rolls of Ektachrome film. After securing the owner's permission, we began to set up for the night. We chose to mount the camera in a high central location so that we could shoot everything and create as little disturbance as possible. We couldn't take any light meter readings, so we just opened up the lens as wide as it would go and got an 85-foot sequence that was one of the highlights of our film.

When it came to getting shots of the surfing, I was pretty lucky. In Santa Cruz, the surfing beaches break right up against a cliff. This makes it hard for the surfers, but very easy for photographers to get in remarkably close.

I wanted to be filmed surfing in the movie myself, but I had been hesitant to let anyone else use the camera. Finally, I let Steve talk me into letting him use the camera to film me. I set all of the adjustments and told him that all he had to do was to look through this hole and press this button.

When I was out, I caught a super long ride, and I had hoped that Steve had gotten it. Not only had he gotten it, but by the time I had gotten back in, he was an old pro at using the Bolex. This insulted me, because I had convinced myself that I was the only one smart enough to figure the Bolex out, and then Steve after having it for 15 minutes could use it as if he had had it for a couple of years.

Of course, no surfing film is complete without its sunset or sunrise. I shot mine at 4 frames per second using a pink filter. The camera speed and the filter gave the setting sun a weird visual effect. Like a private fantasy trip!

On the way home, we reminisced about all of the good times that we had. I had been marking down the footage and the frames with a complete description of each subject shot. That way I could rewind the film and superimpose the titles right over actual parts of the movie!

Before we got home, we ran out of gas and money and had to sell one of our surfboards for seventy-five cents! I had only one chance to film this, so I jumped out of the car and just kept the camera running. With the light lens, I had no trouble getting in on all of the action.

After we got home, I realized that we had only shot 1700 feet of film! I was afraid that we wouldn't have enough for a twenty-minute film. It took three days to get the film back, and I was pleasantly surprised to find that all 1700 feet had come out perfectly. We had taken too much footage along the road, so we had to throw well over half of it away! My only real problem was choosing what to keep! The total footage of my completed color and sound film is 947 feet.

"Come and Get It" is finished now. I have shown the film free of charge to large audiences in Santa Barbara as well as sending a copy to the Junior Chamber of Commerce of Santa Cruz. The surprising fact is that the total cost of my movie was only the \$4.80 I spent for postage!

I still have fond memories of our trip, and I hope that the people who have seen my film have also shared the memories of our trip.

I still have 4000 feet of film still left. This time I want to make a film more personal to me, a film that can convey the true meaning of the surfer, his goals, and his concepts.

My next film will take me far from California, to new lands, new peoples, new ideas. But I can't help remembering my first film and the people who helped to make it possible. So with this in mind, I am leaving to make a film that will be my personal tribute to the last of the individual freedoms—Surfing. And you can bet that my Bolex will go along with me.

"A DAY AT SCHOOL"

WRITING A SCREENPLAY FOR A BOLEX 160

by Susan B. Vaughn

Dear Bill—

Just lying here in the sun, thinking about your new camera and those big, paper mache display animals at the warehouse north of town. I think I've got a good idea for a film script and want to know what you think of it.

Those advertising animals (like Dino Dinosaur) remind me of pop art and its pinpointing of what's grotesque in America's consumer economy with over-size ads to push products. What I can see for a film is using this grotesqueness to show how a mind can be warped, growing up in our plastic-packaged, super-sell world. Perhaps it would be easier if I go through the plot outline first:

A boy gets on a school bus from a farm lane early in morning. Bus is empty except for driver. Boy is dressed in black shirt and slacks and carrying books, lunch pail. This part shot in color.

Bus approaches the warehouse and boy sees animals from distance and keeps watching them. When bus gets in front of warehouse, it stops and boy gets out. As he steps from bus, film is shot in black-and-white and boy is dressed in white shirt and white jeans (but not too pretentiously).

Boy races around looking at all the animals, sort of exploring. He soon settles down and concentrates more on details of the structures—especially the farm animals—the cow comes to mind. He touches it, climbs on it—all over—and from above he sees the tipped over animals in the grass nearby. He goes slowly to them, apprehensive. Concentration here should be on the flaws in the creatures—cracks, chipped paint, rotting wood (if possible). He becomes very subdued, almost trance-like as he explores these broken animals (but I think slow-motion would be too pretentious), sees the school bus approaching from opposite direction, goes to it, gets on. Here black-and-white photography ends and boy's clothes change back to black.

School bus takes him back to his house; he gets off, taking books and lunch pail.

Some of the ideas I have for shooting this story are:

1. Keep the camera on the boy until he reaches the animals. When shooting out the bus window as he looks at the rural scenery, keep him in the picture.
2. As he explores the animals, camera can act part of the time from the boy's viewpoint, but shoot always from about three feet off the ground instead of at his eye-level. This will make the animals appear even larger.
3. The shots showing the boy exploring the animals (not from his viewpoint but with him in the picture) could be shot at normal height—your eye level.

I think this type of film would be effective in 8mm silent. If it were re-printed in 16mm, a musical background could be added. I can see an instrumental version of "Puff, the Magic Dragon" as working well but not intrusive.

I'll be interested to know what you think about this—your suggestions in plot changes or camera techniques. Maybe the story doesn't come across to you. The title I came up with is *A DAY AT SCHOOL*. This is to indicate that one "learns" in strange situations—not just in a particular building. It's hard for me to explain in writing what I think this story would mean. The boy would appear normal at the beginning and end of the film (while on the bus). The scenes with the animals could seem like a fantasy or real. The big animals are meant to stand for the external things that look good in our lives, and the tipped-over and broken animals are the more sordid, decayed side of our experiences or of our society. The empty bus emphasizes the boy's aloneness—just as all of us are alone.

Hope that you'll be interested in filming this.

Your friend,
Susan

ASSIGNMENT: SURVIVAL!

by Chris Borden

Editor's Note: As director of the Southern California Film Institute, Chris Borden oversees the efforts of numerous young filmmakers. And numerous Bolex 16mm cameras. He recounts here how his cameras survive his students. Among the author's own accomplishments are five feature-length films.

Countless articles have been written for the pages of the *Bolex Reporter* by users of Paillard equipment in every con-

ceivable cinematic application. Every photographer has equally shared his enthusiasm for the reliability of the Bolex and praised the quality of the product from spring drive to lens sharpness. But let me tell you of tortures to the Bolex that are, perhaps, never encountered by the normal user in a lifetime. These horrors are not committed by professionals in steaming jungles, tropical climates, dust bowls or volcanic eruptions, nor are they perpetrated by arctic blasts, underwater pressures, moisture, altitudes or severe blows by dropping. The Bolex can withstand all of these problems easily.

The usage I am referring to is that by students in classes of Cinematography, particularly at the Southern California Film Institute. SCFI has fourteen professional 16mm cameras; eleven of them are Bolexes. Why? Obviously, the Bolex is the only camera that can repeatedly withstand the abuses of beginning filmmakers (terrified by the thought of handling such equipment) and continue to deliver trouble-free service day in and day out. Yes, we do occasionally have a minor problem, but generally our staff can repair the situation by a tightening here and there. Each Bolex, however, is given routine maintenance yearly, just as any professional camera should be kept in top running order.

To the beginner a 16mm camera is an awesome thing full of mysterious inner workings and covered with trappings, dials and gauges, nothing like the simple "push the button" smaller counterpart at home. To handle the camera for the first time evokes terror as well as admiration for the "feel" of it. At SCFI we require each student to thoroughly understand every working part of the camera before he is allowed to shoot one frame of film. Endless feet of white leader are first threaded through the loading mechanism and each student must pass a test of loading the camera in a changing bag or "in the dark."

The next step is to make each student "respect" his equipment by carefully making sure he understands the lens system, reflex viewing, variable shutter, frame and footage counter, rewind procedures and tripod mounting. Once he has satisfactorily proved to the instructor he can handle these tasks, the student may begin by shooting his first exercise of 100 feet. It is most unfortunate that purchasers of motion picture equipment are not so similarly checked out by dealers, for it is "never the nut in the camera that fails, but only the nut behind it" as one shop owner pointed out.

But even with all this careful preparation there is gross negligence on everyone's part at first. Usually the trouble can be placed on being too much in a hurry and forgetting that time and patience often take a priority in good photography. Take, for example, the case of one student shooting a sequence on fishing at a local lake. He set his tripod on the bow of the boat to take in the scene. Forgetting something, he jumped down into the cockpit with a violent motion causing the boat to tip enough to send the camera and tripod tumbling overboard into twenty feet of water. Quickly jumping overboard he brought the camera up from the bottom. After a rush back to the school, the camera was opened, dried and then each part was wiped with light oil. The camera was put back together and ran perfectly with no loss in "down time"!

Another unusual case concerns a student who, it was later discovered, was so nervous upon using the camera for two days of "hand held" shooting, that the perspiration created by his anxiety caused certain exposed parts of the camera to rust! This does not speak badly for the camera as anything will rust if exposed to similar "salty" conditions. It's always a good idea to lightly wipe the camera body with a damp cloth of fresh water after being exposed to such conditions.

Probably the worst abuse to the camera is performed when students try to remove lenses by turning the iris ring. Needless to say if the ring is stripped, it is quite a job to have it repaired. The same problem arises when the focusing ring is turned in an effort to remove lenses. We are so happy with our Bolexes at SCFI because they have been in constant use seven days a week for a year and a half with maintenance-free performance other than normal check ups. This is probably equivalent to fifty times normal usage by Bolex owners. As our business grows so will our stockroom: full of rugged, reliable, dependable Bolex equipment.



BOLEX

