

ENJOYING NATURE IN ALASKA THROUGH **VIDEO**



**Bob Armstrong
Doug Jones**

INTRODUCTION

Both of the authors live in Juneau, Alaska an area that is rich in natural resources and wildlife. Southeast Alaska is on the Pacific Flyway which means we get an abundance of migratory birds in the spring and fall, we also have birds that breed farther north and come here to overwinter. The Mendenhall Recreation Area is a black bear viewing area. All five species of Pacific Salmon return to streams in our area. The marine waters here support large populations of marine mammals including harbor seals, Steller sea lions, and a variety of whales. As a result, this is an ideal area to spend time out enjoying and photographing or videoing our abundant wildlife.

The authors have been photographing nature in Alaska for a combined 108 years. Bob arrived in Juneau in 1960 and bought the biggest telephoto lens he could find (a Leicaflex complete with shoulder stock). That began a lifelong hobby of photographing birds in Alaska. Doug grew up in multiple areas of Alaska, including Nome, Cantwell near Denali National Park, and Juneau. He started photographing nature in 1964 after the big earthquake (and still has some of those photos) with his Dad's old (even at that time) Argus C3.

Nature photography is fun, challenging, at times exciting, and rewarding. However, about three years ago we happened to be out together with our camera gear and had the opportunity to photograph a family of hoary marmots. As we both were clicking away one of us and I don't remember who, said why not take a video. We both did take video, and it was a turning point for both of us. When we each got home and looked at the photos then at the video it was immediately obvious that you didn't experience the sense of family and fun in the photos that the videos conveyed. One of our videos of the marmot family is on page 12 of this book if you are interested in viewing it.

Since that encounter we have both embraced the world of video and have been learning about the requirements of video and how to edit and use video to tell stories about what happens in nature. For the most part,

we use different camera gear and have different operating systems so will cover options for video and video editing on both Windows and Macintosh operating systems.

One of our goals is to help readers transition to video by walking you through the questions we asked two or three years ago as we first started transitioning to video. It should be said up front that video files are large compared to photographs. Space then is an issue as well as backing the files up.

We often give public presentations about nature in Alaska. We started out by showing all still photos but gradually began inserting videos into our talks. We learned that a video usually provided people with more learning and enjoyment than still photographs.

In this book we have attempted to show and talk about the video equipment that is generally less expensive and sometimes more versatile than DSLR cameras and the more "professional" video cameras. Also we have found that much of the free software for working with videos is much easier to learn than the video editing software that is for sale. So far, this free software such as Windows Movie Maker and MacIntosh iMovie does a good job for us in putting together a video.

We found that putting together a video is a steep learning curve so keeping it as simple and understandable as possible really helps keep you enthused.

To view the videos click on the [blueish links](#) under the photographs. Some links go directly to Vimeo and some of Bob's go directly to his website first where more information may be found in the bullets under the video.

Acknowledgements: Matt Knutson of InterDesign helped set up the design format for this book and gave us a couple of good ideas. In the beginning Skip Gray, a professional videographer, was always available to answer our many questions.

EQUIPMENT



Panasonic Lumix FZ-200 Camera I have tested this camera under most conditions that one might encounter in nature. Basically what I have found is this camera, with some attachments, can zoom from 25 mm to 2640 mm and stay at f 2.8. It can full frame subjects as small as 2 millimeters from about 4 inches away. **Approximate cost \$300, weight 1.18 lb.**



Neewer CN-160 LED VIDEO lights Work very well for taking videos in the lab or in the house. Sometimes two of them helps avoid shadows. **Approximate cost \$30.**



Raynox DCR-2025PRO 2.2x Telephoto Lens This lens attaches easily to the Panasonic camera (both FZ-200 & 300). It gives a maximum equivalent of a 2,640 mm lens at F 2.8 in the intelligent zoom. This has been very useful in taking video of subjects at a fairly great distance. **Approximate cost \$234, weight 9.7 oz.**



Raynox DCR-250 2.5 Super Macro Lens This lens attaches firmly to the end of the lens on the Panasonic 200 and 300 cameras. With this lens you can full frame about any insect from a bumblebee to a tiny fly from about 4 inches away. **Approximate cost \$79, weight 3-4 oz.**



The Panasonic Lumix FZ-300 Camera has all the benefits of the FZ-200. It focuses faster and has the ability to do 4K video. It also will hook up to WiFi and has a touch screen. It has a coating that makes it more dust and splash proof than the FZ-200. **Approximate cost \$500, weight 1.52 lb.**

Raynox MSN-505 Super Micro Lens Attaches firmly to the end of the camera's lens. Very good for taking video of tiny creatures under lab conditions. **Approximate cost \$100, weight 3.1 oz.**

LM Makrostativ 3 from Micro Tech Lab in Austria This stand allows for very precise focusing and really helps when video taping very tiny creatures. **Approximate cost \$1,140.**

EQUIPMENT



GoPro Hero 3+ Black Approximate price \$350.



GoPro Hero 3 Filter Adapter
55mm BlurFix3 SO Naked Sold
by: Wide Open Camera \$38,

AGFA 4-Piece Close-Up Macro
Multi Coated Filter Kit 55mm
(+1+2+4+10) APCUF455 Sold by:
Classy Outfit \$9.99



GoPro Jaws Clamp Mount

There are probably unlimited ways to place a GoPro in nature but here are some ways we have found to be most useful. This photograph shows the GoPro Jaws: Flex Clamp attached to a willow. It is a perfect size to clamp onto willows, alders, evergreen branches along trails or streams and its flexible neck allows you to adjust for different conditions. Approximate cost \$32.



GoPro—The Strap Hand / Wrist / Arm / Leg Mount for HERO Cameras

The GoPro Strap comes with a large, and medium velcro straps. The large attachment works very well on smaller tree trunks and the medium strap is perfect for smaller limbs and pipes. This photo shows the GoPro strapped to a cottonwood tree along a trail. **Approximate cost \$32.**



We have found that attaching our GoPros to dive weights is very useful. We use a couple methods for attaching the cameras to weights so they can be placed into the water, on a bank, or along a trail in the woods. They can be strapped to the weight using clip-ties or a more permanent solution is to drill through the dive weight and use a ¼-20 stainless steel screw of appropriate length to screw a GoPro tripod mount directly onto the weight. We prefer to use a lock washer on the screw to insure the arrangement is solid and doesn't come apart. After using this arrangement for a couple years now, the two and three pound dive weights work just fine. We have a five pound weight set up like this but don't use it as often as the two or three pound weights.

Note: any time we use our GoPros in salt water we have found that it pays to rinse the assembly off with fresh water afterwards to prevent rust on the steel parts.

EQUIPMENT



Canon Vixia HF G30

Doug has been using a Canon Vixia HF G30 video camera for a couple years now. It comes with a 20x image stabilized optical zoom (35mm equivalent: 26.8mm-576mm). It will record 1080p HD up to 60 frames per second and is very light and portable. It can also take still photos but is primarily designed for video. He also uses **Canon TL-H58 1.5x teleconverter (cost \$342.95)** *shown" which pushes the 35mm equivalent out to 876mm. The teleconverter screws to the front of the camera lens. As with any camera at extreme telephoto, a tripod is highly recommended. **The camera currently costs about \$1149 but the price is dropping with a new G40 on the market.**

Leki Hiking Pole

This has been the most useful pole for putting the GoPro camera in water and hard to reach places. Although only about 4.5 feet long it seems to be the perfect length to carry about. It has a place at the top to screw in a camera which works great for the GoPro as well as a monopod for our other cameras.

One big selling point is it will float so you don't have to worry as much when working in deep water. Also the top half has a rubberized cover which makes for much warmer holding on cold days.



SMALL CREATURES

In the Telephoto Mode

Some cameras will cover an area from one to two inches in the telephoto mode at a distance of three to five feet. This can be very useful for taking videos of large insects such as bees, butterflies and dragonflies without disturbing them.

We usually focus the camera on a particular flower or perch, turn the video on and get the insect feeding, perching and sometimes interacting. We recommend using a tripod and having the camera on manual video and manual focus.

Sometimes leaving or backing away helps to avoid disturbing the subject. These two videos were taken with a Panasonic Lumix FZ 200 or 300 model.

If you need to get a little closer setting the camera in the macro mode helps as the telephoto will still work.



▶ [WATCH INSECTS](#)

Insects on Fringed Grass of Parnassus.

These flowers have five staminodes forming semicircles of stalked pseudonectaries each tipped with a yellowish glistening knob. Although they are dry and rewardless, they attract many insects that probe at the tiny knobs.

It is fun to set up a camera in the video mode and see all the different insects that are attracted to it.

This video was taken in the alpine along the Mt. Roberts Trail in Juneau, Alaska.



▶ [WATCH SKIMMER DRAGONFLY](#)

How the Four-spotted Skimmer dragonfly gets food. This dragonfly is the official insect of the State of Alaska. So it is fun to try to find something interesting about their behavior to video tape.

This dragonfly is known as an ambush predator. They generally perch in one spot for awhile and fly out grab an insect and return to the same spot. This makes it fairly easy to get a video of one hunting.

This video was taken in a muskeg off the Eaglecrest Road in Juneau Alaska. The camera was in the telephoto mode on a tripod.

SMALL CREATURES

With the Raynox Supermacro Lens

This lens attaches to the end of the camera's lens. It allows one to focus on small creatures of only a few mm long from a distance of about 4-5 inches. At this distance you usually do not disturb them. Also it can be useful for taking videos of creatures in a aquarium or terrarium.

If shooting through glass it is best to avoid focusing at an angle, because refraction often distorts the subject. Use the smallest aquarium available so the creature can be in focus anywhere.



[▶ WATCH THE VIDEO](#)

Springtail on the Snow. Springtails come out in the winter and travel about on the surface of the snow. Springtails use the fairly flat snow to move from one habitat to another -- they apparently orientate on the sun or dark horizon to go in a constant direction.

This video was taken with the Supermacro Lens on the Panasonic FZ-200 camera. It was hand held.



[▶ WATCH THE VIDEO](#)

Red Ants Tending Aphids. Colonies of aphids may develop near the top of fireweed plants. To find them look for darkish areas on the plants. These are often tended by red ants which eat the sugary honeydew excreted by the sap-feeding aphids. The ants typically stimulate the aphids with their front legs which causes them to excrete the honeydew. The ants then lap up this sugary sap. The ants generally protect aphids from insect predators.

This behavior is quite unusual and can best be understood by taking a video of them. Look at the top of fireweed plants for a darkened area. On closer examination you will probably see aphids and hopefully red ants tending them.

It is best to try this on a wind free day. This video was taken with the Panasonic FZ-200 camera on a sturdy tripod.

SMALL CREATURES

With the Raynox Supermicro Lens

Taking videos of extremely small creatures can be a real challenge. We have tried special binocular microscope cameras. However our most success has been with another lens that attaches to the end of a camera's lens called the Raynox Supermicro. This lens will nearly full frame an object only .5 mm long.

Because of the extremely shallow depth of field at such a high magnification we needed to work under controlled condition in a lab or house. We have had the most success using LED Video lights with the camera on a macro stand with fine adjustments.



[▶ WATCH THE VIDEO](#)

Water Bear in Action Water Bear is a common name for a group of invertebrates called Tardigrades. They are very tiny about the size of a dot made with a pencil. The word Tardigrade means "slow walker" which describes their rather sluggish, clumsy movement. They are one of the hardiest creatures on earth. They have been reported to survive more than 100 years, often completely dried up. They can tolerate extreme below freezing temperatures of minus 200 C. They are even known to survive in outer space. Water Bears are very common in Alaska and 84 species have been found so far.

This video was taken with a Panasonic FZ 200 camera with a supermicro lens attached. For support we used a Macro Stand. It was illuminated with two LED Video lights. The Water Bear video was taken in a small dish of water.



[▶ WATCH THE VIDEO](#)

Springtails in the Soil Springtails are one of the most numerous macro creatures, we have seen estimates of 100,000 per square meter. They are not insects but belong to a group of invertebrates called Hexapods. They have a tail-like appendage called a furcula, held under tension below the abdomen. When released, the furcula snaps outward, propelling the tiny creature into the air. They are very numerous in the soil and may be important for the health of the soil.

This video was taken in the house on a small pile of soil.

BIRDS

Using the Raynox 2.2x Telephoto

Sometimes you cannot get close enough to your subject to obtain a good video. When this Raynox telephoto is used on the Panasonic cameras it gives the equivalent of a 2,640 mm lens when in the intelligent digital mode.

While photo quality is reduced at such a high zoom mm. The ability to capture certain types of behavior on video is worth it. Also, the loss in photo quality is not noticed as much or, perhaps, not as important when in the video mode.

When using this telephoto lens it is best to have it on a sturdy tripod. We also recommend using a geared head on the tripod for more precise focusing.

This setup can be used in the rain by using a rain hood. Also when used with the Panasonic FZ 200 the video can be turned on and it will run for about two hours unattended.



[▶ WATCH THE VIDEO](#)

Common Merganser Nest Two friends discovered this nest and it was an exciting project to work on. Little is known about the nesting habits of this bird.

Without the use of this telephoto attachment this video would been very difficult to take.

To capture the female leaving the nest required taking a two hour video on two different days.



[▶ WATCH THE VIDEO](#)

Arctic Tern Feeds its Chick too Large of a Fish When visiting Arctic Tern colonies we noticed dead chicks laying beside fish that would be much too large for the chicks to swallow. Arctic tern parents typically do not break up fish or regurgitate food for the chicks. So the size of fish they bring for their chicks is extremely important. This video illustrates how this can happen. One could speculate that the parent with the fish too large for the chicks had another motive since it ended up eating it.

BIRDS

With the Vixia



▶ [WATCH THE VIDEO](#)

Kingfisher with the Vixia I was fixing dinner one afternoon and looked out my kitchen window to see a belted kingfisher land on a log out in front of our house on the lower Mendenhall River. Usually kingfishers do not tolerate human presence so I put my Canon Vixia on a tripod, attached the 1.5 teleconverter and snuck out to the corner of the house and put the tripod/camera around the corner. Using the fold out screen I was able to focus on the kingfisher and start the camera recording. I left the camera and went back into the house so I wouldn't disturb the bird and let the video run. I eventually saw the kingfisher eat the fish and fly away so went and retrieved the camera. When I reviewed the video I was pleased with the resulting video, hard to believe the kingfishers stomach is big enough to hold a fish that size.



▶ [WATCH THE VIDEO](#)

One of the big advantages of video is it can show behavior. This video shows a hooded oriole (a rare bird in Juneau) feeding from flowers by reaching up from the bottom inside the flowers. The literature says that they punch through the sides of flowers but this bird didn't display that behavior. It's often a little more effort to get video but well worth the effort. This was done with the Canon Vixia with the 1.5x teleconverter mounted on a tripod. It was raining so the camera was covered with a plastic sleeve which tends to make the rain sound louder.

FISH

Spawning Salmon with the GoPro



[▶ WATCH THE VIDEO](#)

Sockeye Salmon Both of the authors have been trying for two to three years now to get salmon spawning during the salmon run. We both would love to get video of each of the five species spawning but we had no idea going in, just how difficult that would be. The two species that we have been able to successfully video were both basically luck and monumental amounts of time spent trying. We have been out in the fall for two years trying to get coho salmon spawning without success. We did get lots of good underwater video of coho digging and courting but no spawning. To get this video of sockeye spawning, I put the camera on a five pound dive weight, set it just outside the redd the female was digging and left it for about two hours. The battery had expired when I got back but when I reviewed the video I found I had lucked out with spawning activity.



[▶ WATCH THE VIDEO](#)

Chum Salmon Both of us were able to catch chum salmon spawning during the first season we tried. Chum salmon are big fish and will occasionally attack the GoPro but more often the males, who are constantly fighting, will bump or knock the camera over in the course of that activity. As a result, you pretty much need to stay in the area and keep an eye on the camera and reset it as needed.

MAMMALS

Marmots Interacting



▶ [WATCH THE VIDEO](#)

One of the advantages of video is the ability to tell a story, that story may reside all in one clip or it might take a series of clips put together to tell the story. The following is a quick story of a marmot family playing. Most likely the Dad is the one laying down resting while mom and the youngsters play. No single photograph can convey the feeling of family unity that a short video like this does.

Steller Sea Lions Above and Below



▶ [WATCH THE VIDEO](#)

Sea lions are dynamic marine mammals and fun to watch and photograph or video. In December 2015, we had an amazing opportunity to watch and video sea lions, seals, whales, and lots of marine birds in Auke Bay near Juneau. The parts of this video were all done in Auke Bay during that extravaganza. For the sea lion video underwater, I used my longer extendable pole, extended to 16 feet. The GoPro camera clamped on the end of the pole with a GoPro Jaws Clamp. The sea lions didn't pay any attention to the camera when I lowered it underwater near them from the dock I was standing on. Again, the movie was assembled using iMovie on a MacBook Pro laptop.

TECHNIQUES

Speeding Nature Up



▶ [WATCH THE VIDEO](#)

There are things that happen in nature that take so much time, they are not immediately obvious or easy to watch. One example, here in Southeast Alaska, is our tides. Taking a time-lapse series of photos then making a video that runs in a few seconds rather than the hours it took to take the photos, can be a fun way to watch these changes. This example is a time-lapse video of tide change over four hours; the video runs in just 36 seconds. Available interval options for time-lapse on the GoPro camera are: 0.5 (default), 1, 2, 5, 10, 30, and 60 seconds. The camera in this video was set to take a photo every 30 seconds. The camera was placed and left on the beach near Shaman Island on North Douglas and it ran, in this case, about 4 hours. We got that length of time because we were using a backpack battery attachment that doubles the GoPros battery life.



▶ [WATCH THE VIDEO](#)

I used time-lapse to document one of our trips into Tracy Arm on the cruise ship Disney Wonder. In this video the camera was set to take a photo every 10 seconds. On my Macintosh MacBook Pro, I use Quicktime 7 to create the video. In the File menu there is an option to open an image sequence (all the photos in a single folder) and it creates a video from the image sequence that can be exported in any of a number of formats and sizes.

TECHNIQUES

Speeding Nature Up



▶ [WATCH THE VIDEO](#)

Red-squirrel Extracting and Eating Spruce Seeds This video shows a red squirrel extracting and eating the tiny seeds from a Sitka spruce cone. Each seed has an outer covering that the squirrel removes before eating the seed. This squirrel puts the seed with its covering on top of the cone it is holding (actually it is the bottom of the cone). It then extracts the seed from its covering before eating it. Usually a squirrel can extract and eat all the seeds from a spruce cone in around 3.5 minutes. The video was taken with the Panasonic in the telephoto mode on a tripod. The squirrel video was speeded up four times to give about a minutes worth.



▶ [WATCH THE VIDEO](#)

Spotted Tussock Moth Building its Cocoon This video shows a Spotted Tussock Moth building its cocoon on September 7, 2015 in Juneau, Alaska. These caterpillars were searching for places to build their cocoons. The cocoons we saw were usually on the undersides of rocks. Once the cocoon is built they will pupate inside the cocoon and overwinter. Next spring they will emerge as adults. In these rocky areas they are fairly well protected from the weather. They obviously will be able to withstand freezing temperatures. Probably because they contain special antifreeze compounds.

The larva, commonly called a caterpillar, feeds and grows, usually through five or six instars. When fully grown, it transforms into a pupa, within a silken cocoon spun by the caterpillar. It usually takes over 8 hours to complete this process. This video was speeded up 64 times giving about a 5 minute video.

TECHNIQUES

Slowing Nature Down

Many things happen so fast in nature it is difficult to see the details. Most video cameras have the ability to higher frame rates so that when played back at a normal speed, the action appears to be moving slowly. The GoPro, for example, can take video up to 120 frames per second and when played back at the standard 30 frames per second the action will appear to be in slow motion.



▶ [WATCH THE VIDEO](#)

Slow down you move too fast! This is an example of video at full speed then slow motion. This was done with the GoPro set to a 120 frames per second frame rate. On a Macintosh computer using iMovie (which is software that is included with each Macintosh computer) you have the option of Instant Replay under the “Modify” menu. When you select “Instant Replay” it asks if you want to play back at 10%, 25%, 50%, or 100%. For this eagle diving video I selected replay at 10%.



▶ [WATCH THE VIDEO](#)

Another example of using slow motion is this video an American dipper “diving” underwater. The American Dipper is an amazing bird, the only truly aquatic songbird in North America. Again, this was taken with a GoPro camera set to 120 frames per second, mounted on a dive weight and placed in the bottom of the stream. A note on both these videos, we have found that many things happen in nature when there is no human presence so both videos were taken with cameras that had been placed and left to run. We typically leave the cameras running in place until near the time we expect the battery to expire.

TECHNIQUES

Using Mostly Still Photos

Sometimes you get a short video which, by itself, does not provide much of a story. One technique to improve that video is to add several still photos to the video. The amount of time each still photo is on the video can be easily adjusted. Also, they can be put in some sort of transition by using animations in Movie Maker.



 [WATCH THE VIDEO](#)

How a Bald Eagle gets Fish Many years ago Bob did a study on the techniques that Bald Eagles use to obtain fish from the water. In this study he documented all of the different positions the eagle uses by still photographs.

Recently we (Doug and I) have been trying to document the eagles behavior more from the preys standpoint. A GoPro camera set near a fish bait really gives a different perspective. Combining the still photos with what the GoPro saw makes for a interesting and educational video.



 [WATCH THE VIDEO](#)

Chickadee-dee-dee A friend, John Palmes, wrote a song with that title and thought it might be fun to make a video of chickadees to go along with it. This video includes still photos of all the species of chickadees that occur in Alaska.

TECHNIQUES

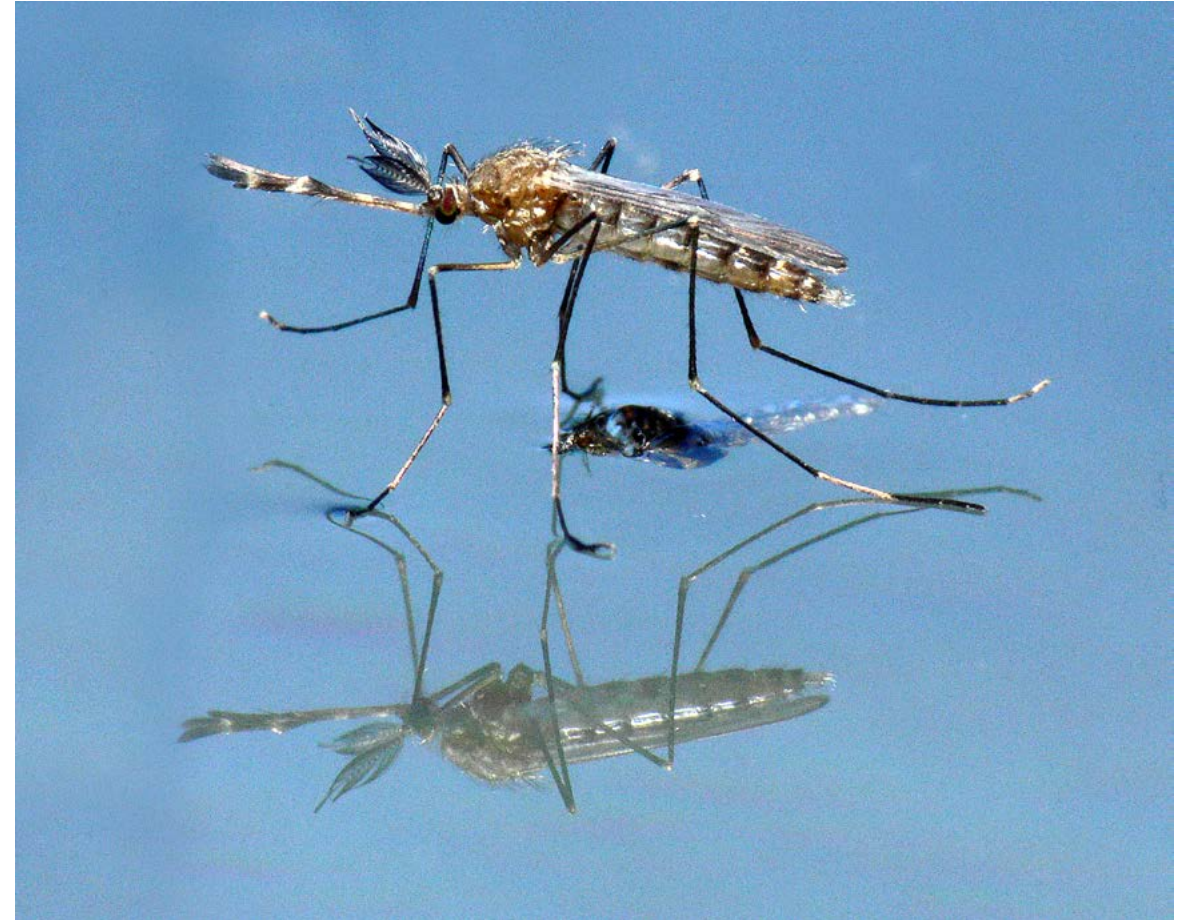
In an Aquarium



▶ [WATCH THE VIDEO](#)

Caddisfly Crawling on the underside of the Ice These caddisflies normally live in rather still water ponds. Sometimes they get washed out of the ponds into silt laden streams. Here they have a hard time moving around. If the stream freezes over, however, the literature says they will crawl about on the underside of the ice and also feed on detritus that collects there.

To make this video we put them into an aquarium outside in winter. When it froze over it was fairly easy then to document them crawling on the underside of the ice. The Panasonic Camera was used along with a LED video light.



▶ [WATCH THE VIDEO](#)

Mosquito Emerging This was a very difficult video to make. Mosquitoes typically emerge from the water as adults at night and then within about five minutes they fly away.

The aquarium was set-up inside the house. The Panasonic camera with the Raynox Supermacro lens was hand held (because they move about the surface so fast).

I was able to capture most of the event and hope to improve on it in the future.

TECHNIQUES

4K Video and Use of Pole



▶ [WATCH THE VIDEO](#)

We have just started to experiment with 4K video. While using 4K for many applications, such as vimeo and power point, it does not work at its full resolution. However when downsizing for these applications (seems to be automatic) the videos look better than if they had been taken at 1080.

In a 4K video you can import it into Photoshop Elements and use grab frame to obtain a particular image. These images turn out to be at full frame 12.8 inches by 7.2 inches at 300 dpi (from the Panasonic FZ 300 camera and the 4K GoPro). This means you can capture a special moment in a video and still use a still image for many other applications.

The photo above is a grab frame taken from a 4K video without any cropping. At the time the Panasonic FZ 300 camera was at a 600 mm telephoto. Also in this video the camera, at times, was zoomed up to 1,200 mm digital zoom.

In this video you will also see the use of the 12 foot pole underwater with the GoPro camera. The fish in front of the camera are coho salmon. They ignored the camera and often swam right next to it and occasionally bumped into it.



▶ [WATCH THE VIDEO](#)

The GoPro Hero 4 Black can take 4k video at 30 frames per second. One of the advantages of 4k video is the ability to extract high quality still photographs up to 3840 x 2160 pixels in size. I used the 4k GoPro for the video of the juvenile herring school and was pleasantly surprised when a juvenile seal swam up near me looking down at the herring school. Bob happened to be right beside me and took the video of me with the seal and GoPro on my walking/monopod stick. One nice feature of the GoPro series cameras, is you can toggle the camera to take video while the camera is upside down and the video comes out rightsized up. That was a feature used for this video.

TECHNIQUES

Using the Canon Vixia HF G30



▶ [WATCH THE VIDEO](#)

Doug uses a Canon Vixia HF G30 video camera with a 20x image stabilized optical zoom (35mm equivalent: 26.8mm-576mm). It will record 1080p HD video at up to 60 frames per second and is very light and portable. It can also take still photos but is primarily designed for video. He also uses Canon TL-H58 1.5x teleconverter which pushes the 35mm equivalent out to 876mm. As with any camera at extreme telephoto, a tripod is highly recommended. This video of a juvenile bald eagle shows the zoom range of the camera from wide to the optical maximum, then with the 1.5x teleconverter attached at optical maximum and finally into the intelligent zoom. This video was taken at Fish Creek on Douglas Island. It will also give you a feeling for how sensitive the microphone is even when the subject is a respectable distance from the camera.



▶ [WATCH THE VIDEO](#)

Another example of video taken with the Canon Vixia is this Sitka Blacktail deer. One of the things we both prefer is to video and or photograph birds and animals as relaxed as possible in their natural environment. The larger zooms allow you to be well away from your subject so you aren't a threat. They can relax and go about their activities unimpeded by your presence and the resulting video better represents the birds or animals daily activities. In many cases, we have left the cameras running on a tripod and left the area to get video without human influence. Things seem to happen in nature when humans aren't present that don't when you are standing or sitting nearby.

TECHNIQUES

Adding and Editing Natural Sounds



[▶ WATCH THE VIDEO](#)

Salmon in Alaska at Spawning Time When taking videos of salmon underwater most of the natural sounds are of the salmon moving gravel. In most of the areas where we were working ravens were constantly calling from the nearby trees. In this video we recorded the ravens calling with another camera. Then extracted the audio and attached it to this video to give a more natural experience.



[▶ WATCH THE VIDEO](#)

Four Ravens talking to each other This video was taken along a busy street in Juneau. There was a lot of traffic noise. We extracted the audio from the video in Movie Maker and then edited it in Audacity software. The traffic noise was fairly easy to eliminate. Then the audio was attached to the video where the original sound had been muted.

TECHNIQUES

Adding Music and Songs

In general we do not add music to our videos. We prefer the natural sound of nature. Also if our videos are being used by others for education or conservation we feel music might make it difficult for someone to tell the audience what is going on in the video.

On rare occasions, however, adding a song to a video can make the video much more entertaining. Especially if the song helps tell the story.

Most popular songs are copyrighted and you cannot legally insert the song in the video without permission. Also Vimeo does not allow copyrighted songs in a video and will usually prevent you from uploading them to their site.

If you are showing your video to friends or possibly even making a presentation to a group, such as a local Audubon Society for free, you may be able to play the song as you are showing the video.



 [WATCH THE VIDEO](#)

Try a Little Harder This was one of the first videos that I made. It was of a beaver attempting to take a log into its lodge before winter. The video was not very good quality but what the beaver was doing was great. It showed so much patience and perseverance.

By starting a song by the Rolling Stones titled “Try a Little Harder” it fit perfectly with the video and ended at just the right spot.

When Bob gave a presentation to a school in Gustavus he showed this video. When the song started the audience came alive and one girl got up and started dancing.



 [WATCH THE VIDEO](#)

Effect on Certain Creatures



[▶ WATCH THE VIDEO](#)

Duck Panic

Wild mallards congregate in the lower Mendenhall River near my house. They show up every fall and stay until about March and I feed them grain over the winter. I thought it would be fun to put my GoPro out and get close up video of wild mallards feeding. It turned out that they are panicked by the GoPro camera. It is something they see as foreign in their environment and they want nothing to do with it. Once they panic and fly they will not come back and feed until the camera is gone. My son bought me a black case for my birthday and I tried it thinking maybe it wouldn't be as objectionable. Same reaction, and Bob suggested I cover the small window with the clock running. I did that and they still panicked when they saw it. Some birds and mammals, such as wild red squirrels, avoid our cameras



[▶ WATCH THE VIDEO](#)

Dippers Love GoPros or do They?

This shows some of the reactions of an American Dipper to a GoPro camera. One time it captured a salmon fry and brought it in front of the GoPro and ate it. Then it sang in front of the GoPro. They have a beautiful song and even sing year round so I was glad to have it recorded. At first I thought it was either ignoring the camera or performing in front of it. But then it pecked the camera a couple of times and used it as a launching platform when feeding underwater. The sequence is fun to watch and to speculate.



[▶ WATCH THE VIDEO](#)

Doug's Experience

With Bob's experience with dippers singing and performing in front of his GoPro I decided I wanted similar video with an ultimate goal of videoing a dipper singing in a snowstorm. First I needed to find a spot where they stood and would sing. I found a rock that looked promising and put my GoPro out near it on a dive weight. The instant the dipper saw the camera it went over and started pounding on the camera. They are obviously very aware of anything different in their environment. The dipper in this image is out of focus because it had approached too close to the camera.

THE UNEXPECTED

Deer Nursing Twins



▶ [WATCH THE VIDEO](#)

These twin fawns were just born and the mother (doe) is starting to take care of them by nursing them and licking. At this stage the fawns have some difficulty walking and standing—note the one that falls down. Fawns usually weigh 6.0 to 8.8 lbs and have no scent for the first week or so. Having no scent means that predators would have difficulty finding the fawns. This enables the mother to leave the fawn hidden while she goes off to browse and replenish her body after giving birth. Notice that the doe spends some time licking the rear end of the fawns. The reason the Doe is licking the Fawn's rear end is to stimulate a bowel movement, which in turn will help keep the Fawn's odors in check while it is bedded down in a safe location.

This is good example of why it can be important to have a camera with you. I was just taking a walk on the beach and was not intent on photographing anything.

This video was taken with the Panasonic FZ 200 camera, hand held.

What the Lost GoPro Saw



▶ [WATCH THE VIDEO](#)

In an attempt to strap a GoPro, that was on a metal stick, to the railing of a float it slipped out of my hands and sank. The water was quite deep and I could not see the bottom. Apparently it landed facing up which gave a unique view looking from the bottom to the water surface. About two weeks later a friend with diving gear dove and retrieved it.

The camera ran for about two hours. I was amazed by what the camera saw and from a unique view point.

TELLING A STORY

About an Insect

Insects are so common and abundant and many have fascinating life styles. For getting videos of their life styles and behavior you are mostly limited by your imagination. Reading articles or books about insects can lead to fascinating projects to work on.

The nice thing about telling a story is you can use a variety of video clips and even still photos or illustrations.



▶ [WATCH THE VIDEO](#)

Queen Bumblebees in Alaska The short video part of this sequence shows a queen bumblebee feeding on early blueberry and salmonberry blossoms in Juneau. These flowers typically bloom in April and early May before most other flowers bloom. The queen bumblebee is probably the main pollinator of these flowers and the flowers are important for the queen to lay her eggs in the nest.

This video covers the major parts of a queen bumblebees life and the workers that help after she lays her eggs. Finding a bumblebee nest was important to gather enough information for this story. Most of this video was taken with a Panasonic FZ 300 camera usually on a tripod.



▶ [WATCH THE VIDEO](#)

The Spotted Tussock Moth (*Lophocampa maculata*) belongs to the subfamily Arctinae (Tiger Moths). These moths are well protected from being eaten by predators. As adults they make a clicking sound that helps prevent them from being eaten by bats. According to Marshall (2009) *Insects their Natural History and Diversity*: "The clicking sound these moths make in response to bat sonar is like a warning "color" bats can hear. There is also some evidence that the moth clicking can interfere with bat sonar." As caterpillars they are well protected with their bright warning coloration. According to Marshall they are the most distasteful of all moths.

Most of this video was taken with the Panasonic FZ 300 camera in the telephoto mode and sometimes in the macro mode.

TELLING A STORY

About a Bird

Bird behavior can be very fascinating. Usually we observe them for some time before attempting to take a video. Most important, we feel, is to use techniques that do not disturb them. GoPro cameras are so small that they can usually be well hidden. Also, having a long telephoto lens and multipliers helps keep one at such a distance that your subject is not disturbed.



▶ [WATCH THE VIDEO](#)

Taking Care of the Kids, Black Oystercatcher Black Oystercatchers are common nesting birds along most of the southern coastal areas of Alaska. They usually nest on small islands but in some areas, such as Glacier Bay, they may nest along the rocky mainland shores. The female typically lays one to three eggs. This nest has three eggs so the “clutch” is complete. Both sexes incubate. At first mostly female, but male equalizes duty later in incubation period. Eggs are covered 90–98% of time. Parental feeding of offspring extends well after chicks develop independent flight. One parent guards or broods chicks while other parent forages.

The clip on incubating eggs was easy to make. A GoPro was set in front of the nest and the bird returned within a couple of minutes. The section on the parent feeding the young required about two hours of patiently standing nearby in the cold and wind. This clip was taken with the Panasonic FZ 200 on a tripod.



▶ [WATCH THE VIDEO](#)

Rock Sandpipers in Winter This video took a couple of years and several months of trying different techniques. The ground level sections were taken with a GoPro on medium setting set in the gravel with a dive weight. The flying sequence was with the Panasonic FZ 300 hand held. The final clip of them resting in the snow was taken from the car using a bean bag for camera support--the Panasonic FZ 300 with the Raynox 2.2 telephoto at maximum extension (2,640 mm).

TELLING A STORY

More about Birds



▶ [WATCH THE VIDEO](#)

Sapsucker benefits Hummingbird This video is a good example of the relationship between Red-breasted Sapsuckers and Rufous Hummingbirds. Sapsuckers typically drill holes in trees which causes the tree to release some of its sap. These woodpeckers have a brush-like tongue to lap up the sap. Other woodpeckers have a tongue with a sharp, horny tip for spearing insects. This sapsucker has gathered insects and sap to feed its youngsters. In Alaska Rufous Hummingbirds are known to nest near sapsucker trees and feed heavily on the sap -- which may be more nutritious than flower nectar. The hummingbirds will feed their youngsters the sap and the insects that might be attracted to the sap. The distribution of Red-breasted Sapsuckers and Rufous Hummingbirds in Alaska is nearly identical.

This video was taken with the Panasonic camera on a tripod.



▶ [WATCH THE VIDEO](#)

Yellow Warblers feeding their Chicks This video illustrates how both parents take care of their kids. Their kids typically raise their rear end and extrude a fecal sac which the parent grabs and takes away. One chick did not do this and deposited its fecal sac on the nest. The parent grabbed it and fed it to the chick.

This video was taken with the Panasonic on a tripod.

TELLING A STORY

About Mammals



A Very Special Bear

▶ [WATCH THE VIDEO](#)

This is a video of a special bear that frequents the Mendenhall Glacier Recreation Area. She is known locally as Nicky and has been a frequent visitor to Steep Creek during the summers since at least 2003. This is an example of using still photographs mixed with video from more than one camera to try to tell a larger story. This video was prepared in iMovie on a MacBook Pro laptop computer. All video is copied onto the computer then Quicktime Player is used to trim the video into the sections that will be used in the longer video. In Quicktime, the "trim" function is under the Edit menu and it allows you to move a slider to where you want the clip to start and another to then end. The pieces are then assembled in iMovie and voice is added at the end before exporting the whole thing to the final video (called Share in iMovie).



▶ [WATCH THE VIDEO](#)

Another example of a story in a clip is this video of an otter family. This video was taken near Skagway in a driving rain storm. I didn't realize what was happening until I reviewed the video much later. This is a mother that is teaching the pups how to fish. She goes out and catches sculpin and brings them back, shows it to the pups, then drops it into the water so they have to go catch it themselves. Sculpin are probably one of the best fish to use because they typically don't swim far before settling to the bottom.

TELLING A STORY

About Fish

GoPro cameras seem to excel in taking video underwater. In general fish seem to accept their presence and sometimes even approach the camera. The one-two pound dive weights work well for setting the camera on the stream bottom and walking away.



▶ [WATCH THE VIDEO](#)

Male Stickleback Protects the Nest This video shows the effort that the male stickleback goes through to protect the nest with the eggs and developing young.

The video was taken with a GoPro camera set on medium with a 4 + macro lens attached. A 4.5 ft hiking pole was used with a small dive weight attached.



▶ [WATCH THE VIDEO](#)

Walleye Pollock in Alaska In one of the square open areas along the last set of floats at the Auke Bay Harbor in Juneau the Walleye Pollock were feeding on herring fry.

This video was taken with the GoPro camera on the medium setting and in the upside down position. The camera was attached to the 4.5 ft hiking pole and we could just hand hold it towards where the fish were feeding.

TELLING A STORY

At a Conference about Nature

Organizations that have connections to the environment and nature often have film festivals associated with their annual meetings. Usually any member or past member can submit a video and it will be shown and/or posted at the meeting or on their website. Not only is this fun to do you can learn a lot about making a video to share with others. Of special importance, we feel, is this gives one an opportunity to look at the videos submitted by others. We have submitted a couple of videos to the annual meeting of the American Fisheries Society. Usually they have a limit on how long the videos can be -- perhaps mostly under 8 minutes. We tried to think of subjects/ stories that would be different than what other people were doing.



[▶ WATCH THE VIDEO](#)

The Value of Woody Debris in Streams When salmon spawn they displace huge numbers of aquatic insects. These insects drift and swim downstream and often settle in pools containing woody debris. These are areas where salmon do not spawn so the insects are not disturbed by their spawning activities. American Dippers know where the insects are so they often forage for them in the debris piles. In winter we have found large numbers of juvenile fish, especially Dolly Varden and coho salmon, concentrated in these piles of woody debris.



[▶ WATCH THE VIDEO](#)

Blow Flies and Salmon in Alaska There are many connections in nature with salmon. This video documents a few of them. In this video we added some narration to help people understand these connections.

To put together this video we used both Panasonic and GoPro cameras. Several techniques were used including telephoto, underwater on a dive weight, above water with the GoPro, some clips with the Raynox Super Macro, and leaving the cameras to run for a couple of hours at a time.

TELLING A STORY

About One that Continues



▶ [WATCH THE VIDEO](#)

Juneau through Ravens Eyes This has been a really fun video to develop. Lots of ravens patrol the streets and parks of Juneau. They are also commonly found in the more remote areas, including the mountains and the beaches. So I am always looking to capture a video of a raven with some part of Juneau evident in the clip.

It is especially rewarding because when I capture another scene or a better one I can replace the video on Vimeo and all the links to it remain intact.

About a Fairly Long Event



▶ [WATCH THE VIDEO](#)

Auke Bay—A very Special Place In December of 2015 huge numbers of juvenile herring appeared in the Auke Bay boat harbor for several weeks. This attracted seals, sea lions, a couple of whales, loads of murrelets and murrelets, and several other birds to feed on them. You could wander about the harbor floats and get videos of many of these creatures up close. You could put a GoPro underwater on a pole and get videos of many of these creatures underwater. It was an incredible once in a lifetime sort of event. In my 50+ years in Juneau I have never seen anything like it.

Putting together my favorite video clips of the event resulted in a fairly long but memorable video that I will always treasure.

TELLING A STORY

Just for Fun

Sometimes when you are taking videos in nature something happens that isn't natural or doesn't quite fit a particular story. It is fun to think how you might be able to use the video. What usually works is to think of a story that is sort of funny.



[▶ WATCH THE VIDEO](#)

Feeding Birds During Bear Season in Alaska In Alaska we are constantly being warned about feeding birds during bear season. Although there is no law against it we do not generally recommend feeding birds at this time. However, if you must this video shows how it "might" be ok.

The Panasonic camera was set inside the house on a tripod in the macro mode. Through a partially open window in the second story we were able to capture the birds coming to it.



[▶ WATCH THE VIDEO](#)

Domestic Mallard thinks it is Superior to Native Mallards A pair of these domestic mallards showed up at a public pond in Juneau where people feed the birds. The pond is also a sanctuary for mallards during hunting season.

It was fun to think of what they might be saying to each other. The video was taken with the Panasonic camera, hand held.

MAKING YOUR VIDEO

Windows Movie Maker

Windows Movie Maker is a free program and the one that Bob has been using. This program does about anything I want to do with a video. It is fairly easy to understand and work with.

There are many options for saving the video. I usually choose for high quality presentation. This works well for uploading into vimeo and for their use in Power Point presentations. They have several other options such as for facebook, twitter, etc. You can also just save the soundtrack and work with it in another program.

For viewing the raw video I use VLC media player (a free program). I will note the times that certain clips appear so once I load it into Windows Movie Maker I can easily fast forward it to the important spots in the raw video. You can also do this in Movie Maker but in general it is much slower and harder to work with than in VLC media player.

Movie maker has numerous options for working with a raw video. The ones I use the most are under edit: adjust sound (you can mute it), split which allows you to remove the sections you do not want, insert a video or photo, settings to speed up or slow down sections of the video and settings which allow you to view a still for different lengths of time.

After I save the video I also save the changes made to the original video. This allows you to open up the original video with all the changes visible and accessible which makes it very easy to modify.

iMovie for the Mac

iMovie is a free program that comes with Macintosh computers so is the one that Doug has been using on his MacBook laptop computer to make videos. Another program that comes free with a Macintosh is Quicktime Player. Movies created on any of my cameras open by default in Quicktime Player so that is the first program I use to start the editing process. It is quick and easy to trim videos using Quicktime and often I get home with hours of video but only want to use a few seconds of the days efforts. I save the clips and import them into iMovie where the larger video is assembled before putting titles, credits and sound as desired.

To get started with iMovie, I found there is a huge library of training videos for iMovie on youtube.com. That's where I started when I needed to get familiar with iMovie and figure out how to produce my first video. It is also a good resource for learning more about GoPro and other cameras.

iMovie saves projects with all the resources so you can go back and modify previous videos as you get new material. In iMovie, you can save a video directly to a variety of options but the one I use most often is to save to a file (in iMovie it's called Sharing, you share a movie). I use the highest resolution available to get the quality I prefer.

MAKING A PDF

With Links to the Videos

1. Organize the document in Adobe InDesign or another program.
2. Use a photo to draw attention to the video.
3. Copy and place the link under the video and highlight it.
4. Export the document to an interactive PDF.
5. View the PDF in Adobe Reader which is a free program.
6. Advantages of using links:
 - a. The PDF is small enough to be easily downloaded or e-mailed.
 - b. A striking photo can draw more attention to the video than an embed. The photo can also be cropped to better fit the design whereas embedded videos cannot be cropped.
 - c. Can be done at no cost and shared for free whereas embedded videos, because of the large size of the PDF, would require a CD or thumb drive to share them.
7. Disadvantages of using links:
 - a. Requires the videos to be stored some place on line.
 - b. You need to be able to access the internet in order to view the videos.
 - c. May be slow to load with a weak internet connection.
8. For storing videos on line we have really liked Vimeo.com.
 - a. The cost for 5GB uploading per week is \$59.95 per year.
 - b. There are numerous options for viewing the videos from private (only you or people you select) to anybody can view them.
 - c. You can modify and replace the video and all the links to the video remain the same.
 - d. You can easily provide links to the videos from your website.
 - e. The options for viewing them range from 480p to 1080HD.
 - f. They can be easily enlarged to view full screen.
 - g. They are very easy, if you allow it, for people to download them for free.

With the Videos Embedded

1. Organize the document in Adobe InDesign or another program.
2. Try to make the opening image on your video to be an attention getter.
3. Do not make the opening of your video too fancy i.e. with darkened or dark gradually becoming brighter. Otherwise the embedded video in the PDF will appear black or darkened. Although this can be fixed by inserting "poster" in the InDesign program but more work.
4. After you place the video in the document be sure and open up windows and go to interactive and open up media. Select roll over full view and click view with bar. This will allow the viewer to have control over the video such as to stop it in certain areas.
5. View the PDF in Adobe Reader which is a free program.
6. Advantages of using embedded videos:
 - a. You do not have to have access to the internet to view them.
 - b. They usually load fairly fast.
7. Disadvantages of using embedded videos:
 - a. The PDF is too large for e-mailing and easy sharing.
 - b. Requires a CD or thumb drive in order to share the PDF but may be shared by one of the upload programs.
 - c. Changing the video will not upgrade the video in PDFs that others already have.
8. Vimeo is an excellent place to store your videos for later embedding in a PDF. When you download them from Vimeo it may be best to select HD720 quality. Downloaded from Vimeo automatically puts them in the correct format (MP 4) required for embedding them into a PDF.