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REVIEW: Fotoman Professional 617

Medium Format Film Panoramic Camera

Part II

Last month I talked about the construction and lens selection of the Fotoman Professional 617 Panoramic Camera. This month I would like to continue the Review by going over the workflow involved in taking panoramic photos with the camera and conclude with some examples of photos that this camera is capable of taking.

If you have experience with shooting images with a Large Format camera and some experience with Medium Format cameras then you shouldn't have any

problem operating the Fotoman 617. If, however, your experience comes from 35mm or DSLR photography then you need to prepare yourself for a whole different photographic experience. This is a basic camera. Some of the things you will NOT find on the camera are automatic film advance; thru the lens metering or any type of metering for that matter; double exposure prevention; automatic film rewind; WYSIWYG viewfinder; or anything that hints of automation. I told you last month that this was a strictly manual, basic camera that does one thing, and one thing only - takes 58mm X 168mm panoramic film images.

The easiest way of understanding what it takes to photograph through this camera is to actually go

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IAPP e-Monitor

The IAPP e-Monitor was designed to give our membership a quick look at what is going on with the IAPP and with panoramic photography in general. It was originated to give our membership quicker information while they await the release of the PANORAMA.

We welcome any and all articles and photos from IAPP members for inclusion into the IAPP e-Monitor. This is a publication for the IAPP, by the IAPP, and about the IAPP.

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through the procedure of shooting an image. It is a good idea, a really good idea, an almost mandatory idea, to create a checklist to remind you what you need to do to get an image with this camera and what steps you need to take, and in what order, to come away with a panoramic image of your chosen target.



Composition

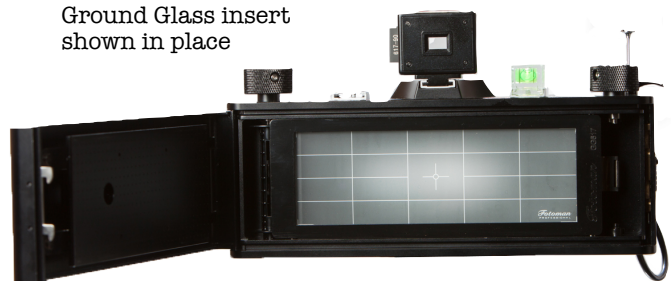
Like all photographs you take you must first examine your target for good composition. After all, a large, long picture has a certain appeal but without a good, artistic composition, it's just a large, long picture. That means, that as your first step, you must examine the target with the camera to see what aspects are going to be captured and what aspects will be excluded. Normally you see your target through the camera's viewfinder and that view will tell you all you need to know. That view will tell you if you need a different lens, or if you have to move your camera to a different location or shift it in a different direction to get a better composition. With the Fotoman 617 you can look through the accessory viewfinder to get a general understanding of where the panoramic camera is pointing but it will only give you a GENERAL view. I found that it can tell me approximately where the left, right, top, and bottom of the frame was going to be but having an approximation is not usually good enough for what I want to shoot. If an approximation is good enough for you than the auxiliary finder may be all you need. If your photography requires something more precise then you should opt for the 6x17 ground glass that costs a little extra. Again, if you have used Large Format cameras before then you have the experience necessary to do critical focusing and composition with this glass. The way it operates is that you open the back of the camera,

set the lens's aperture to its fastest setting, and open the shutter. You then take the ground glass out of its protective wooden sleeve and place it against the film guides where a magnet in the camera's film rails latches onto the metal frame of the ground glass and pulls it securely into place. You now have a ground glass focusing screen on which to focus and compose your upcoming image.

Now here comes what you might consider a downside to the Fotoman 617. Wide-angle lenses suffer from severe vignetting when wide open. This vignetting is not as obvious with normal and telephoto lenses as it is with wide-angle lenses but most panoramic cameras utilize wide-angle lenses for those wonderful panoramic images so it is something you have to put up with. For this review, I simply grabbed my focusing cloth from my 4x5 camera and did what is needed — cover the rear of the camera and my head, and compose my image on the ground glass. This is the time when you should also critically focus the lens to this focal plane but, in reality, you don't have to. Just get it close. Why? because with a wide-angle lens, the depth of field is so great that you can focus just by reading the depth-of-field numbers on the focusing scale surrounding the lens.

Once you have the composition adjusted on the ground glass then you can remove the focusing cloth and pull the 617 ground glass away from the magnet and put the glass back into its protective wooden sheath. Then, **and I can't stress this enough, close the lens shutter and put the lens cap back on the lens.** If you don't do this now, I can guarantee that you will ruin the first image on your roll of film, if not more. How do it know this? In testing this camera I have shot at least a dozen rolls of 120 film and I have ruined the first image on at least half of those rolls. Remember when I told you earlier that there is no double exposure prevention on this camera? Well, if you don't close the shutter and/or put the lens cap on, then your shutter continues to be wide open. And when you load your unexposed film in the camera, and wind it to the first frame, it is now completely exposed.

Ground Glass insert shown in place



This is why I stress that you make and follow a checklist as you are setting up and exposing film in the camera.

Loading the Film

Only now that you have composed the frame on the ground glass and removed it, and once you have closed the shutter and attached the lens cap, you are now ready to load your 120 film in the camera. Here is where some experience with Medium Format cameras will help. With DSLRs you don't have to worry about film to wind. With 35mm film cameras you have to pull the leader from the 35mm film canister over to the take-up spool and, if it is an old 35mm camera, you have to thread the film leader into the take-up spool and then close the camera back and advance the film until the frame counter says "1". With Medium Format film cameras you place the 120 film spool into one side of the film back (whether it is on the left or right side depends on the camera) and pull the film from the film spool along the film path and thread it into the take-up spool on the other side. You then advance the film until the word "START" on the paper backing on the 120 film aligns with an arrow near the take-up spool. When this is done you close the back of the film chamber.

With the Fotoman 617 the process is pretty much identical. The film spool goes in the right side of the camera (when you are looking into the open camera back). You then pull the film along the camera's film rails and thread it into the take-up spool on the left side. Once that is done you rotate the knob that is attached to the take-up spool in the direction of the arrow surrounding that knob until the word "START" is aligned with the film roller adjacent to the take-up spool. At that point, make sure that the film is pulled snug between the two spools and close the camera back. Push the back firmly until you hear it click. The pressure plate that holds the film flat has very firm springs because 168mm or 6 1/6 inches of film has to be held

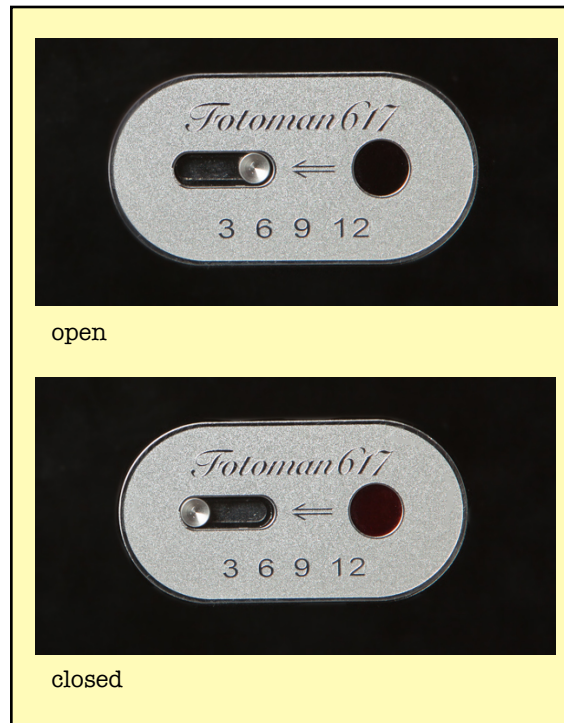
perfectly flat. Hence the heavy duty springs. Remember that the camera has no automatic film advance or frame counter. You position each frame in the same way that the "old-time" cameras did - by looking through an amber-colored window in the back of the camera and reading the frame numbers that are written on the paper backing of the 120 film. In the case of the Fotoman 617 there is a silver metallic plate on the camera back that has

the words "Fotoman617" and under that, a small left-to-right sliding switch that covers and uncovers an amber-colored round window. Sliding it to the right (as you are facing it) opens the window, and sliding it to the left closes it.

With the film loaded and with the window open you can just barely see, as you turn the take-up knob, a series of black circles that diminish in size as you turn the knob, until the number "1" appears in the window. If you were shooting a normal-size frame this is where you would stop. But you are shooting a 17 cm panoramic frame so you must continue turning the take-up knob until you pass the number "1" and continue

along, passing another series of black circles that diminish in size until you reach a number "2". Again, continue advancing the film past another series of black circles until you get to the number "3" and then STOP! You have now positioned the film for the first frame in your 6x17 panoramic image. Now, slide the switch to the left and close the window.

You are now ready to expose your first frame. A roll of 120 film will give you a total of 4 frames. To get the rest, you open the window and rotate the take-up knob as you did before, this time stopping on the numbers, "6", "9" and "12", for the next three frames. Don't worry if you can't remember all this, because, right under the sliding switch, you find the numbers "3", "6", "9" and "12" engraved on the silver plate. Now that you have composed your image and loaded the film, you are ready to set your focus.



Focus

Since this is a rangefinder camera, it does not focus through the lens. The lens is set into a helical focusing mount that sits on the front of the lens cone, with a focusing scale as well as a depth-of-field scale surrounding the mount. Remember when I told you that you didn't have to be super-critical in focusing on the ground glass? With the focusing



scale and depth-of-field scale you set a range of focus area. Ask yourself two questions: 1) Does your composition demand that objects on the distant horizon (infinity) be in focus? 2) How far is the closest object in front of you that needs to be in focus? Once you decide on the answers to these two questions you can set the focus. Let's see how that works:

If the answer to the second question is "15 feet or about 4.5 meters", and the answer to your first question is "Yes", then you can use the depth-of-field scale to adjust your lens so that everything from 15 feet to infinity will be in focus. The Depth-of-Field scale is the one that has the aperture numbers equally spaced from the lens's center focus mark. On either side of that mark you will find the numbers that coincide with the normal aperture settings equally spaced. On the camera being reviewed, the lens is a Schneider Super-Angulon XL with a focal length of 90mm and a maximum aperture of f/5.6. So, if I want to shoot at f/16 I can place the infinity mark on the focusing scale to one of the f/16 marks on the Depth-of-Field scale and, when I look at the duplicate f/16 mark on the opposite side of the lens's focusing mark, I can see that it is past the 15 foot (4.5m) mark. Which means that everything from infinity to about 13 feet will be in focus. Taking this a step further, if you set the infinity mark to the f/22 mark and you look at the duplicate f/22 mark on the depth-of-field scale, you will find that it aligns slightly beyond the 10 foot/3 meter mark. Meaning that, at f/22, everything from infinity to about 10 feet (3 meters) will be in focus. This lens will stop down to f/45 (normally, I would not go that low) which would give a focus range from infinity down to about 5 feet or 1.5 meters. Of course, at these low apertures the shutter speed will be quite slow so, if there is any breeze and you are shooting flowers in a field, you will have a lot of motion in your frame.

Now, remember, this basic camera has no meter so grab your hand-held meter and, using your incident meter or your reflective meter on a medium toned target in your field of view, identify your exposure. If you are not familiar with using handheld meters then go get a book and learn all about them. I won't go into their workings in this review.

Once you have your exposure setting from your meter, then set your appropriate aperture (based on your depth-of-field) and the shutter speed necessary for the correct exposure. Next, cock the shutter and remove the lens cap. Finally, trip the shutter with your cable release and your first panoramic image is "in the can".

Checklist

As a review, and as the basis for a Checklist for operation of the Fotoman Professional 617 Panoramic Camera here is what is needed to take a photograph:

1. Level the Camera on a tripod. Note: there is an auxiliary bubble level that fits into a flash shoe atop the camera for leveling purposes.
2. Get a general overview of where the camera is pointing using the auxiliary finder.
3. Open the back of the camera and place the optional 6x17 ground glass against the magnetic film rails.
4. Remove the lens cap and open the shutter. Make sure that the aperture is set wide open.
5. Compose your shot by examining the ground glass, preferably from under a focusing cloth or by using a Hoodman Hoodloupe or any opaque-base loupe.
6. Remove the ground glass and replace it in its wooden sheath
7. Place a roll of 120 film in the right-hand film chamber and secure it under the knob.
8. Pull the film from its spool and attach it to the take-up spool on the left-hand side of the camera.
9. Rotate the take-up knob until the word "START" on the film's paper backing is aligned with the roller nearest the take-up spool.
10. Close the camera back.
11. Slide open (move it to the right-hand position) the rear cover of the film numbering window (sliding switch) and rotate the take-up knob until you see the number "3" in the amber-colored window. Close the film numbering window by sliding it to the left.
12. Decide your focus depth-of-field. Set the infinity emblem and your closest focus point adjacent to the aperture that will give you that extended focus.
13. Set the aperture of the lens to equal the depth-of-field.
14. Using your handheld meter, set the desired aperture and get the resulting shutter speed.
15. Adjust the shutter speed on the lens to give the correct exposure.
16. Cock the lens shutter and remove the lens cap.
17. With the shutter release cable, trip the shutter.
18. Place the lens cap back onto the lens.
19. Slide open the rear cover of the film numbering window and rotate the take-up knob to the next panoramic frame (6, 9, or 12).
20. Close the film numbering window.
21. Bracket around the metered setting until the roll is completed.
22. Rotate the take-up knob until you feel the film come off of the film spool and continue to rotate it until it is completely wound around the take-up spool.
23. Open the camera back and remove the film from its position in the take-up chamber.
24. Tuck in the end of the film and secure with the provided tape.
25. Using a Sharpie pen carefully note what is on the roll and store the roll safely in your bag.

You might say to yourself, "Self, this is an enormous amount of effort compared to using a DSLR to shoot and stitch a panorama. Why should I go through all this? Is there any advantage over the DSLR imaging?"

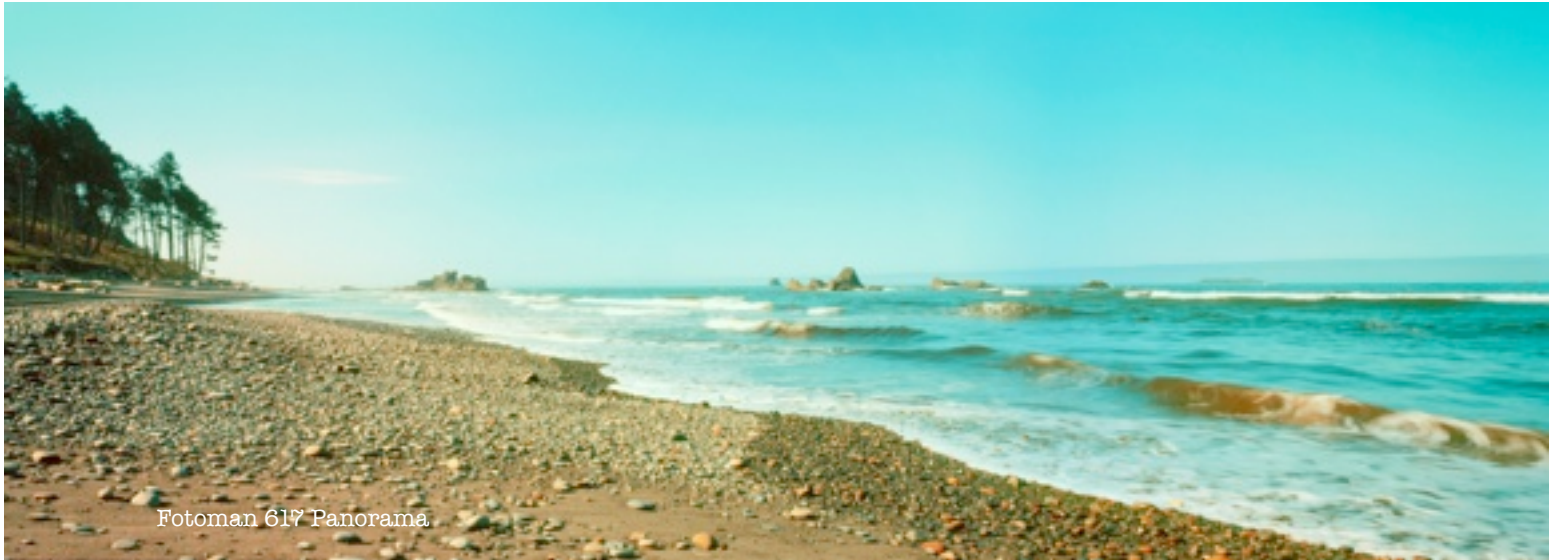
Well, the answer is "Maybe". Shooting a panorama with a DSLR is certainly faster. Also, when shooting with a panoramic film camera in this digital age, you almost certainly have to have the film image scanned so that you can digitally process it to the point where you are happy with it. The first

and foremost reason to use a film panoramic camera is that you get the panoramic image in one shot.

If you have ever shot a series of images with a DSLR and used a panoramic adapter to set the lens at its nodal point (entrance pupil) as it is pivoted around for the pan, you know that, as you take the series of exposures, things are constantly changing. The wind is making branches or flowers move to a slightly different location on the overlapped frames. This alone gives a reason to use a dedicated panoramic camera, where you get

the panoramic image in one trip of the shutter. Another reason to use a panoramic film camera is the amount of data that is captured in that one panoramic image. When scanned at a high resolution the resulting files can be hundreds of megabytes in size compared to the 12 to 36 megabytes per each section of a stitched pan.

I know that software can solve much of the problems with ghosting of moving objects in overlapping scenes when shooting with DSLR cameras. But, what time you make up in shooting stitched panoramas you lose by stitching together



several images. So which is better or preferable, stitching several DSLR digital images together, or shooting a single film panorama?

Images

I've written about the build of the camera, the range of lenses, and its operation in the field, so now it is time to examine some of the images that I have been able to shoot over the few weeks I have had the camera. The first thing that I noticed about the images is that the vignetting is very obvious. In images taken in bright sunshine the light fall-off on the edges is not nearly as bothersome but, shots in bright sunshine with high contrast are seldom as pleasing as those shot in the magic hours near sunrise and sunset. It is the darker areas at the edges in that lighting that stand out, or fade out as the case may be. To alleviate this problem, film panoramic cameras have used a Center or Equalizing Filter over the lens. This graduated Neutral Density filter is darker in the center and gradually radiates to clear near the edges and is used to bring a more even spread of light to the film

and counter the vignetting that is common to wide angle lenses. I'm sure that you can purchase a Center filter for many of the lenses that can be used with the Fotoman 617 but Fotoman Professional offers another option. Since the majority of 617 film images will be scanned and rendered as a digital file, they have available a digital Center filter that can be overlaid with any digital scan of the film and manipulated in PhotoShop to effectively cancel the vignetting.

One of the speakers at the Everett Conference, Tom Sheckels, talked about using the masking feature in Photoshop to choose the most appropriate masking and alignment of wave and foam formations when digitally stitching a panorama containing images of water and waves together. While quite effective, it did require a large amount of post-production work in order to make the stitching work properly. Of course, the more you work with this method, the faster and more efficient you become. On the way back from the conference I took some panoramas of Ruby beach - a stitched version and one taken with the Fotoman



Digital Stitched Pan

Professional 617 panoramic camera. Here are the results:

Image Details

The stitched panorama (above) was taken with a Canon 5D and a 45mm T/S lens. The other with the Fotoman 617 (page 6) with a 90mm wide angle lens and Velvia 100 film. The Canon images were stitched together with AutoPano Pro and the 617 image was scanned with an Epson Perfection 4490 flat bed scanner. Dawn made a digital center filter mask in PhotoShop and used it to eliminate most of the vignetting.

If you look carefully you will see where the stitched pan has numerous finagles in it. (Finagles are areas in the stitched pan that do not align properly due to the fact that they were taken at different moments in time. It is called that because you must do a lot of “finagling” to get them to merge properly). In the image taken by the Fotoman 617 you will see that the surf is continuous and absent of finagles because it was shot in a single moment of time.

Result? **Advantage — Fotoman 617.**

The next set of images (1 is to the right) was of Multnomah Falls just east of Portland, OR. I spent

the first few minutes setting up the Fotoman 617 and set it back from the railing. One of the things that happens when you set up the 617 panoramic camera is you get an audience and, invariably, you have members of the audience asking questions about the camera and the type of photographs it takes. This does allow you to meet a variety of interesting people that you would have otherwise never met. The problem is that you are unable to get the shot when you need to because you have to respond to the queries. My solution was to have Dawn standing next to me and answering all questions while I continued composing, adjusting, and tripping the shutter. In the stitched pan I didn't have to worry about the change over time for each image because the waterfall was constant and stitched together without problems or errors. Had the wind been blowing appreciably it could have changed the locations of the flora or worse, the spray of the waterfall. In this case, there were no problems. On the other hand, the film pan did suffer from color imbalance. With DSLRs you can dial in the color balance but with film you have either “Daylight” or “Tungsten”. With the daylight film (in this case, Fuji Velvia) the color is correct unless your targets are in shadow



Fotoman 617 Panorama



or under cloud cover. When this happens the color shifts towards the blue end of the spectrum. The only way to alter this is to use a color balance filter on the lens, in particular, an 81b filter. This would have warmed the image and given it a better color balance. I should have dug out my 81b filter from somewhere in the Jeep, but, frankly, I forgot about filtering the film. My fault for using digital for so long. Fortunately, when Dawn scanned this film image she was able to color balance it in Photoshop. The image of the Falls to the left is taken with the Canon 5D and the 45mm Tilt/Shift lens, and was made from three vertical frames, each of which were made by three HDR exposures. ***In this case the advantage goes to the DSLR.***

The third case would be the panorama on page 1. This image was shot with the 617 and provided the easiest case of panorama shooting — open daylight and no wind. In this case, both types of cameras, film and digital had no advantage over the other. The setup time of the 617 camera pretty much equaled the multi-image capture of the DSLR.

While I didn't consider all of these images a "Shoot Out" between DSLR vs Fotoman 617, it does give you an idea of which camera works best under a variety of conditions.

What about the price of the Fotoman Professional 617 camera? I haven't spoken to Steven Clere about pricing at all but the advertising folder that

Steven gave out at the Conference did have a Price List inside. So here is what it says:

Fotoman 617 Body - \$1,200

Cone Assemblies (depending upon lens chosen) Range \$400 to \$1,150.

Optical Viewfinder - \$150

617 OVF Mask (for 617 Viewfinder) - \$20

617 Ground Glass - \$80

Lens (90mm f/5.6 Schneider Super Angulon XL) - \$2,400

Keep in mind that this camera is newly made and any one you buy will, likewise, be new. I don't believe the Fuji 617 and other film panoramic cameras are made anymore. Any one of these you buy would be used.

Pros & Cons

Here is a brief rundown of the Pros and Cons of this camera based on testing it over the past month:

Pros: Great lenses; Simple, basic camera operation; Shot is taken in one moment of time and thus you get no finagles; expense is less than a high-end DSLR.

Cons: Simple, basic camera operation; Uses film that needs processing and scanning to bring it into the digital age; Slower workflow in the field; Uses filters to change color balance.

Is the Fotoman Professional 617 panoramic camera worth the expense? The easiest answer for me would be to say "Yes", but, for the individual IAPP member,

it will depend upon whether or not you need it for the type of photography you do. If you absolutely need to have the panoramic image shot in one moment of time, then it is quite worthwhile to have. If not, then it may not be for you. It is a good, simple camera that delivers what it promises, a camera that can give you a large 58mm by 168mm image that will give you a 458 megabyte file at 2,400 (ppi) pixels per inch (this is scanning with my old flatbed scanner).

Acknowledgements:

My thanks to Steven Clere for loaning the camera to me so I could shoot lots of panoramic photos, and use those photos to do a review as well. Also to my wife, Dawn, and fellow IAPP member, for doing hours of scanning and processing of my panoramic images so that I could show some of the results in the article.

Fotoman
PROFESSIONAL

PANORAMIC CAMERAS



Fotoman 617



Fotoman 624



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T minus 2 Issues

With the completion of the June issue of the e-Monitor, we have just 2 more issues until we reach the end of the third year of publication. I have asked the membership to be cognizant of what was on the initial issue and the purpose of this monthly publication. From Issue 1, Number 1: *“We welcome any an all articles and photos from IAPP members for inclusion into the IAPP e-Monitor. This is a publication for the IAPP, by the IAPP, and about the IAPP. There are many talented members that have images and information to share and we desperately need it.”*

We have many members who have contributed to this publication over the past three years. Next month we will acknowledge those members by name and thank them for their contribution to the organization. Their actions truly represent what it is to be a member — the sharing of knowledge concerning all things panoramic.

I have continually asked, throughout this publication, for members to contribute the time it takes to write an article and send along some images for the rest of the membership to share. Unfortunately the response has been less than I had hoped for considering the number of IAPP members. I will be finishing out the final two issues but, whether or not any issues are created after that will depend entirely upon the membership. If I receive no further articles by August 15 then there will not be a Volume 4.

How to Submit Articles to the e-Monitor

This is your organization. And your newsletter. If the subject matter isn't what you want to read about, then send in the perfect (to you) article. If the organization is making a turn that you do not agree with, step in. We welcome all volunteers.

Email (bryan@snowprophoto.com) your article as a document, with notations within your article where you want your photographs to appear. Please do not place your photographs within your document as this will compress the images too much. Please send them as separate files: tiffs or jpegs; 300 dpi and not larger than 7 inches on the long side. Or send the files to IAPPs DropBox. Contact email dawn@snowprophoto.com for an invitation to join IAPPs Dropbox.

The deadline to submit articles is the 15th of the previous month you wish the article to appear.

Next Issue:

The July issue will feature a view of one of the most outstandingly picturesque National Parks in the country — Yosemite National Park.