25 Years Ago, in the *JBPA/JBP*

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In this column, we look back at the content and imagery found in the Journal of the Biological Photographic Association (JBPA), later renamed the Journal of Biological Photography (JBP). This column examines important articles from 25 years ago. In doing so, we gain some insight into those legacy photography techniques of that time.

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In 1994, the Journal of Biological Photography published four issues. Here, we will provide a look back at all four issues from Volume 62. This is a synopsis of an editor's choice of articles within the Volume, and as always, it has certainly been interesting going back and rereading the papers. Some things have changed, but many have not. The professionalism of the BPA/BCA membership goes on. Makes us wonder, just how many great scientific events have we recorded? (As a note, the first heart transplant was not photographed.)

Cover of *JBP* Vol. 62, No. 1, January 1994

***JBP* Volume 62, Number 1**

The image on the cover, “*Arabidopsis thaliana*- Comparison of Blue Light Sensitivity,” by James E. Hayde, RBP, from the University of Pennsylvania, was awarded the Natural Science Transparency at the 1993 Professional Exhibition at BIOCOMM 93. It illustrates some of the many diverse skills needed by the biophotographer.

A paper by A. Robins Williams, of The Royal Melbourne Institute of Technology, and Gigi F. Williams, from The Royal Children's Hospital, Melbourne, Australia, “The invisible image – A tutorial on photography with invisible radiation, Part 2: Fluorescence photography,” goes into great detail of the world of fluorescence. Fluorescence is unseen to the human eye under “normal” lighting, but by using UV light and sensitive filters, fluorescence can reveal much concealed detail and key information, including blood flow in retinal vessels; cracks in metal parts; fingerprints; etc. This well-documented paper includes nine pages of references.

Michael A. Morris of University of Arkansas, Little Rock, Arkansas, presented, “Eye on progress: Serial document of construction projects,” which illustrated another skill needed by the biophotographer. He discussed how he documented the construction of a new building that was being erected over several years, with serial photographs from a fixed position. Another example of recording with no chance of a “take two.”

Figure 1. Documenting building construction

JBP Volume 62, Number 2

This issue demonstrates some of the many varied skills of the biophotographer. Not everyone will photograph microscopic organisms or a new building being constructed over several years, but this is all part of biophotography.

Cover of *JBP* Vol. 62, No. 2, April 1994

Continuing their paper on invisible images, A. R. Williams and G. F. Williams contributed "The invisible image – A tutorial on photography with invisible radiation, Part 3: Reflected infrared photography." In this section, they discussed photography in the >800nm range. They followed the lead of H. Lou Gibson, who conducted much pioneering work in IR photography, tracing blood vessels under the skin in 1930's. Included are eight pages of references.

Figure 2. Leg vacuolization with IR photography

Figure 3. Mission Statement of Medical Sciences Media Services

"Working together: A strategy for developing departmental unity," from Kenneth V. Michaels, University of Arkansas, Little Rock, Arkansas, discussed the importance of a department working together as a unit, and as part of the whole institution. (**Figure 3**) A departmental Mission Statement is important.

Cover of *JBP* Vol. 62, No. 3, July 1994

JBP Volume 62, Number 3

"Background interference and camera angles in wildlife photography," from James E. Hayde, RBP, University of Pennsylvania, illustrates how a slight change of camera angle can make a major difference. (**Figure 4**) Being aware of the

background is tremendously important; recall the classic, ‘tree growing out of a person’s head’ image.

Figure 4. Change of angle gives a different background

“Visibility and resolution of covered specimens with incident-light illumination,” submitted by Arthur Strange of BIOARTS in Scarborough, Ontario, Canada, demonstrated how lighting can be the key to getting a useable image.

Cover of *JBP* Vol. 62, No. 4, October 1994

JBP Volume 62, Number 4

In the paper, “Critical incident stress and the medical photographer: Its causes and effects,” Randy Austin-Cardona of the VA Medical Center in Allen Park, Michigan, chronicles the stressors of medical photography. Photographers are called upon to document many uncomfortable subjects within a teaching environment. They usually are not called on to record the usual occurrences but, the ‘once in a lifetime incident’ in the operating room, emergency department, or the morgue. The mental stress of seeing the injured person is difficult, and the stress of having to record the images and producing slides or prints certainly adds up.

Employers must be aware of the signs and symptoms of Critical Incident Stress.

Signs and symptoms of Critical Incident Stress	
PHYSICAL	
Fatigue	Muscle tremors
Sweating/chills	Difficulty breathing
Gastrointestinal distress	Dizziness
Nausea	Headaches
Chest pain	Elevated blood pressure
Sexual dysfunction	Startle reactions
Hyperarousal	
COGNITIVE	
Memory impairment	Anomia (word loss)
Difficulty with decisions	Mental confusion
Intrusive thoughts/visions	Poor concentration
Poor attention span	Difficulty with calculations
Slowed problem solving	Violent fantasies
EMOTIONAL	
Anxiety/fear	Depression
Irritability	Grief
Loss of emotional control	Guilt
Feeling lost/overwhelmed	Anger
BEHAVIORAL	
Changes in eating habits	Sleep disturbances
Remoteness/numbness	Excessive silence
Changes in work habits	Fearlessness
Unusual behaviors	Inability to relax
Avoidance	

Figure 5. Signs and symptoms of stress

Leon J. Le Beau, PhD, of Le Beau Images in Indian Head Park, Illinois, authored “Health hazards in the biocommunications department.” This article documented some of the physical hazards that can be present within a biocommunications department. The five categories include; mechanical; electrical; fire; chemical; and infectious. The department must do everything possible to prevent injuries from these health hazards. This issue published two papers regarding the hazards of biophotography.

On a personal note, I survived over 50 years of biophotography and three years working in Army Medicine. I found that some of the mental stressors could actually be worse than the physical ones. While working for a major burn unit in California, I photographed many horrible injuries. After a morning in the OR and outpatient clinic, I sometimes had to take a walk around the hospital just to “clear my head.” That said, it was a still a great career.

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Author

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