



## **‘DIGITAL PHOTOGRAPHY FOR SCIENCE: CLOSE-UP PHOTOGRAPHY, MACROPHOTOGRAPHY AND PHOTOMACROGRAPHY.’ Enrico Savazzi**

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## BOOK REVIEW

**‘DIGITAL PHOTOGRAPHY FOR SCIENCE: CLOSE-UP PHOTOGRAPHY, MACROPHOTOGRAPHY AND PHOTOMACROGRAPHY.’ Enrico Savazzi.** Raleigh, NC, USA: Lulu, 2011. 698 pp., 23×15 cm. Paperback, ISBN 978-0-557-92537-7. Hardcover, ISBN 978-0-557-91133-2. Available from [www.lulu.com](http://www.lulu.com).

With the advent of digital photography, the use of traditional film has slowly declined until it is now regarded as only for enthusiasts and the nostalgic. While scientific photography has long been a topic of numerous publications, very few, if any, have dealt specifically or exclusively with digital media. Enrico Savazzi aims to fill this gap and has done so with an all-encompassing manual that will prove invaluable for advanced amateurs as well as professionals.

The book consists of 13 chapters, totalling 698 pages. The first two chapters are quite technical and go into great detail about the functioning of digital camera systems, touching upon numerous topics including storage and battery options, camera types, file formats and the mechanics of capturing digital images. The mathematics, mechanics

and physics of camera optics are also covered and might prove quite challenging for those whose mathematics is a bit rusty.

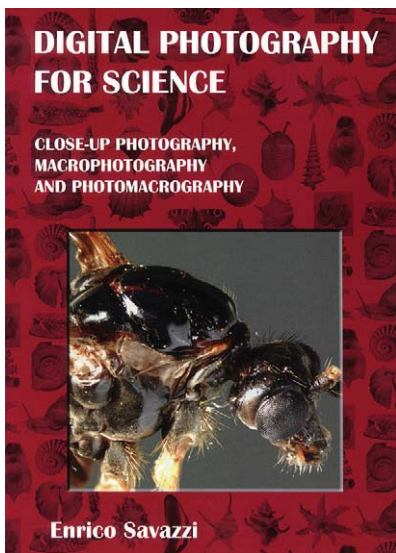
The section on specimen mounts is quite useful as it can save readers a lot of time with regard to subsequent image processing, especially in avoiding having to photoshop out mounts and pins.

One of the more interesting chapters is “Photographing the invisible and the barely visible”, which deals with numerous techniques and special equipment for capturing that which the naked eye cannot see. The section on High Dynamic Range techniques is particularly insightful as it illustrates the use of various exposures to create a finished image that would otherwise not be possible in terms of colour and detail. This chapter is especially useful for anyone wanting to take photos of specimens that cannot be achieved by

conventional methods. Illumination of the subject, and photographic exposure, are also covered thoroughly in later chapters.

Chapter 10 has an excellent section on focus stacking, which in my opinion is one of the most important techniques to understand. The author goes into great detail, explaining all the need-to-know basics from how the stacking software works in theory to the commercially and freely available software options. I found the section on automated focus stacking quite interesting and helpful, as it explains not only how the process works but also how to build your own stacking equipment, something that can be of great use to scientists who cannot afford a Leica or Nikon system.

<http://www.africaninvertebrates.org.za>



The final three chapters are especially useful to all who use digital techniques in their research as it covers photographic workflow, the preparation of images for publication and how to set up a proper photography room. The chapter on preparing images for publication is especially valuable as nothing causes a bigger headache to a journal editor than incorrect images and the inability to follow instructions to authors.

The book is published via print-on-demand and as such it does have a paperback-novel feel to it in terms of paper and print quality. It has numerous photographs to illustrate techniques, instruments and photographic results, which are unfortunately all in black and white. However, all these photos have a note stating that the high quality colour versions are available online on the author's website. While this is a creative way of saving on printing costs one cannot help but wonder if the URL will still be valid in five years' time. A more effective way could have been to include a data disc at the back of the book, which would still have lowered printing costs while at the same time ensuring the availability of the images in the future.

This book comes highly recommended to all who makes use of scientific photography in their research output, and also to anyone who uses any form of computer generated imagery, and it would be an excellent addition to any institutional or personal library.

**B. S. Muller**