

A critique into the ethics of astrophotography, with a focus on Beth Moon's book: "Ancient Skies, Ancient Trees". A cautionary tale.

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ABSTRACT This critique investigates ethical issues in relation to astrophotography, and the book "Ancient Skies, Ancient Trees" by Beth Moon. The book features astrophotography of ancient trees around the world. In 2019, a controversy erupted when the legitimacy and accuracy of Beth Moon's images were questioned, when her images appeared on NationalGeographic.com. Serious flaws in the images were detected, and her images were removed from the National Geographic web site. The issues are critically assessed, including what was published, acknowledgments, praise for the book, the initial concerns regarding image validity, the ensuing controversy, a critical appraisal of the images, the ethical concerns articulated, the consequences including action by National Geographic and the aftermath response by photographer Beth Moon.

Introduction

Ethics in astrophotography is investigated, with a focus on astro-landscape photography, via three case studies. As with all fields of endeavour, false or misleading information (even when it is unintentional) can cause great harm, as it can misrepresent, confuse, and redirect resources and efforts to less constructive outcomes.

Case Study 1. "Ancient Skies, Ancient Trees" book authored by Beth Moon

1. "Ancient Skies, Ancient Trees".

The book "Ancient Skies, Ancient Trees" was published by Abbeville Press and authored by photographer Beth Moon. The photographic book presents astro-landscape images featuring ancient trees. The author states:

"I continued to chronicle the oldest trees, but now I used the hours of darkness to photograph under the light of the stars" (page 7).

Source: "Ancient Skies, Ancient Trees" by Beth Moon (2016) Abbeville Press.

2. Praise for the book

Many comments of praise about the book are posted on <https://bethmoon.com/books/> from science related and non-science related publications. Example:

"Moon reveals a side of Earth that is majestic, awe-inspiring, and almost unbelievable ... Does this sort of raw, transcendent scene really exist? Yes. Moon considers ancient, undisturbed trees the way some trekkers see the Himalayas or astronauts see outer space. Visiting these areas is to witness firsthand a world that is prehistoric, almost pre-human."
—SF Weekly

Source: <https://bethmoon.com/books/>

3. A critical review, and issues emerge

There are numerous examples of questionable images and image processing evident in the photographs, see for example pages 72, 73, 82, 83, 84, 85, 86, 88 & 92. Page 84 shows the Milky Way in a highly non-realistic form, with major image cloning / image duplication or image replication very evident in the Milky Way.

4. The controversy erupts

Major questions are raised regarding the veracity of several of the images. See for example the online article by Inside Imaging.

"Fake sky images' outrage astrophotographers".
May 10, 2019. <https://www.insideimaging.com.au/2019/fake-sky-photos-outrage-astrophotographers/>
And also:
"National Geographic 'fake sky' scandal erupts".
19 May 2019. <https://www.insideimaging.com.au/2019/national-geographic-fake-sky-scandal-erupts/>

5. The ethical concerns are articulated

"Rather than promoting her work strictly through art-based publications, Moon's pictures often receive publicity from science and nature magazines, including Smithsonian Magazine and Wired. The articles frame the captures as a true representation of a setting, with Moon discussing the difficulty of perfecting exposures at certain locations, with no mention of heavy editing, cloning, or making night sky composites."

Source: "National Geographic 'fake sky' scandal erupts". 19 May 2019. <https://www.insideimaging.com.au/2019/national-geographic-fake-sky-scandal-erupts/>

6. Response from National Geographic

"On April 26, National Geographic published photos by Beth Moon on nationalgeographic.com, depicting the world's oldest trees against the night sky. Significant concerns about the veracity of the images have been raised on photo industry blogs and social media."

"We have removed the images and related story pending the outcome of our investigation. This step does not mean we have determined that the images do not meet our standards, as we are unable to make a determination at this time. The images will not be re-posted unless they meet National Geographic's standards."

Source: <https://www.nationalgeographic.com/photography/article/these-ancient-trees-have-stories-to-tell>

7. Aftermath. Response from Beth Moon

"I am late to this discussion as I am attending my father's funeral. First, I want to say that I am not much for technical expertise. For me, it's not about the equipment. For these pictures I developed a fairly simple formula and memorised it, varying adjustments occasionally to suit the light. I also usually take my time producing work, but this work under starlight was the exception. With three back to back trips and a book deadline I enlisted the help of an intern seven years ago. During her six-month term she helped to batch process images and she also hand-stitched the panoramic shot in question. I got back in touch with her to ask her about this process. She remembers stitching the images together one by one, lining up the tree branches by using the transformation tool to line each shot up. I believe the problem stemmed from the distortion of the wide angle lens used. She claims she did not use the clone tool. To be clear, I am not passing the blame on to her. My name is on it and I take full responsibility. This is a painful lesson. I am sorry to have upset so many people. I did not intentionally try to hide anything and I apologise. With the passing of my father I am reminded to try to concentrate on a bigger picture, which I hope to do going forward."

Source: "National Geographic 'fake sky' scandal erupts". 19 May 2019. <https://www.insideimaging.com.au/2019/national-geographic-fake-sky-scandal-erupts/>

Despite these comments, the book remains on sale and available to the public.

The broader implications of ethical issues in astrophotography are examined, with reference to other real-world circumstances. Astrophotography provides a very important resource for the communication, promotion and advancement of astronomy in our community. Such image resources are used in publications, promotions, media, new releases, exhibitions, film productions, online usage in social media and via web sites. It is essential that astrophotography is created and used ethically and lawfully. Key ethical insights are featured via quotes, such as Theodore Roosevelt "Justice consists not in being neutral between right and wrong, but finding out the right and upholding it, wherever found, against the wrong".

8. Key learnings and insights

- There is no substitute for technical excellence and experience in the field of astrophotography.
- Beware the beginner, or the astrophotographer with relatively little experience, who outsources image processing, and publishes under their own name.
- Generally, the photographer should do their own image processing. If a third person is used for image processing, they should be acknowledged.
- The image processor should have a detailed understanding of astronomy, as one method to check images for accuracy and validity. If there is uncertainty, ask a genuine expert.
- Expect work to be scrutinised, from a global community of advanced and knowledgeable photographers and other experts.
- Images can be precisely analysed to detect errors, faulty image processing or falsifications.
- There is a clear case of the need for images with integrity, and accuracy in images. In many cases, accuracy and integrity is of paramount importance, e.g. documentary photography, scientific research, images used in a court of law for evidence.

9. Genuine astrophotos should be respected for the value they represent....

- Astrophotographers go to a lot of effort to achieve genuine images, often based on years of skill and knowledge development.
- Genuine astrophotographs provide real insight into nature and the night sky.
- The real challenge of astrophotography means the sense of achievement is that much greater when a genuine image, with integrity, is achieved.
- Genuine astrophotos provide a historical record.
- Photos are intellectual property and protected via copyright.

10. Input was invited

The author of "Ancient Skies Ancient Trees", Beth Moon, was invited to provide input into this conference poster. No response was received.

11. Critique available

"A critique into the ethics of astrophotography, with a focus on Beth Moon's book: "Ancient Skies, Ancient Trees". A cautionary tale". The complete critique is available at www.celestialvisions.com.au

"Justice consists not in being neutral between right and wrong, but finding out the right and upholding it, wherever found, against the wrong".

Theodore Roosevelt

www.goodreads.com/quotes/423147-justice-consists-not-in-being-neutral-between-right-and-wrong

Case Study 2:

An Australian Astrophotography Exhibition

The facts This case study is based on a real occurrence of an astrophotography exhibition in Australia. The identity of the exhibition is withheld.

FACT 1. A ten-year retrospective of an Australian astrophotography exhibition, was presented at a professional gallery.

FACT 2. Despite the milestone event of the ten-year retrospective exhibition, the hosting gallery failed to use the correct name of the exhibition.

FACT 3. The exhibition opened with none of the 17 featured photographers being appropriately acknowledged, in breach of the terms and conditions of the exhibition.

FACT 4. Despite being badged as a ten-year retrospective exhibition, no acknowledgement was provided at all of the curator who initiated, developed, managed and curated the exhibition during the ten years.

FACT 5. A staff member at the gallery, who had no prior involvement in the exhibition, curated the ten year retrospective.

FACT 6. The gallery verbally acknowledged that their own exhibition standards regarding their management of the ten-year retrospective had not been met, however, they provided no apology to the founding curator.

FACT 7. Representatives of the gallery and the current exhibition managers were invited to provide comment into this poster, and they either refused, or did not respond.



Exhibition photos were presented anonymously, with no captions and without ID numbers.

2. Ethical appraisal

For any professional gallery to open an exhibition, fail to acknowledged the photographers, breach contractual terms, and then refuse to apologise, is highly unethical behaviour.

"People who lack integrity will refuse to give credit where credit is due and will steal your creativity and pretend to be you".

Frayda D Fields

www.pinterest.com.au/pin/156218680811798233/

Case Study 3:

Views about Ethics & Astrophotography

1. Global view about ethics & astrophotography

Views about ethics and astrophotography were sought from leading international astrophotographers from *The World at Night* (www.twanight.org) and astronomy communicators, including contributors from USA, Germany, Romania, Spain, Turkey, Austria, Canada and Chile. The full record of feedback received is available at www.celestialvisions.com.au

2. Key quotes:

Mike Simmons (USA) Board of Directors, International Dark-Sky Association
"The Universe and the view of it from Earth is awe-inspiring enough without the embellished artwork that is sometimes misrepresented to the public".

Tunc Tezel (Turkey) Member: The World at Night
"...it is important to acknowledge the planning and effort to produce this kind of work, and respect the good, honest work of photographers".

Mike Simmons (USA) Board of Directors, International Dark-Sky Association
"Outreach astronomers deal with the misinformation in these images all the time, with people asking about what they've seen. And they are usually disappointed to learn that the image that awed them wasn't what they thought. This can affect the whole field of outreach astronomy, leaving the impression in members of the public that what they see can't be trusted".

Valentin Grigore (Romania) President, Romanian Astronomy Meteor Society / Member: AWB
"With the technological advancement in astrophotography, many imposters have appeared who manipulate images in Photoshop that they present as real. But that has nothing to do with reality. Fake astrophotography has been on the rise lately... ..We need an international code of ethics in astrophotography that is voluntarily adopted by real astrophotographers. Thus, a true astrophotographer will adopt and promote this ethic. Thus, the astrophotographer will gain credibility.

Alan Dyer (Canada) Member: The World at Night
"They (i.e. great photography masters) chose to enhance reality, not to fabricate it. They chose to retain their reputation for authenticity when recording the wonders of nature. Nightscape photographers should strive for similar ethical standards"

Gernot Meiser (Germany) Member: The World at Night
"Unfortunately, (...designed and edited photographs...) suggest to the viewer a nature that cannot be found anywhere on our planet and convey an ideal world to the viewer that does not exist."

Mike Simmons (USA) Board of Directors, International Dark-Sky Association
"...he asked why we represented the night sky that way since it doesn't really look like that. I could answer that it really does look like that (for the most part) and he should go see for himself. It's a way to show what we've lost to light pollution, part of our natural environment that people don't even know exists. It's a way to educate people and encourage them to rediscover their lost heritage".

Gernot Meiser (Germany) Member: The World at Night
"With the advent of digital technology in photography and the rapid development of image processing software, it is now possible for almost everyone to manipulate images and, with the help of social media, to spread these images as the truth".

Bettymaya Foott (USA) Director of Engagement, International Dark-Sky Association
"Many places in the western US are inundated with an incredible amount of light on the foreground to light it up, disrupting people's experience of an otherwise naturally dark environment, and potentially disrupting nocturnal species".

"Injustice, in the end, produces independence".

Voltaire

www.brainyquote.com/quotes/voltaire_145528

Legal advice provided by Griffiths Rice & Co Barristers and Solicitors. Dr John Goldsmith / www.celestialvisions.com.au / Western Australia, thanks all contributors, reviewers & advisors for their contributions towards this conference poster, including Dr Chris Thorne / www.floatingorigin.com. Thanks to all global consultation respondents including Gernot Meiser / Germany, Bettymaya Foott / USA, Mike Simmons / USA, Valentin Grigore / Romania, Bernd Pröschold / Germany, Tunc Tezel / Turkey, Christoph Malin / Austria, Juan Carlos Casado / Spain, Alan Dyer / Canada, Kerry-Ann Lecky Hepburn / Canada & Yuri Beletsky / Chile. A full record of the global consultation (Case Study 3) is available at www.celestialvisions.com.au