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

Version: For public release.

Date prepared: 9 November 2021

By: Dr John Goldsmith / www.celestialvisions.com.au

Copyright status: © 2021

Contents

1. A critique of ethical issues in astrophotography	3
2. Advancing astrophotography	4
3. Copyright and Intellectual Property	
4. Ancient Skies, Ancient Trees.	
4.1 The main purpose of the book	5
4.2 Some insights into the experience and technical competence of Beth Moon	8
4.3 What was published	8
4.4 Who was acknowledged?	
4.5 Praise for "Ancient Skies, Ancient Trees"	10
4.6 A critical review of images, and issues emerge	11
4.7 The controversy erupts	11
4.8 The ethical concerns are articulated	13
4.9 The response by National Geographic	
4.10 Aftermath, the response by Beth Moon	
4.11 What went wrong with the National Geographic photo selection process?	17
4.12 "anything goes" for arts sake VS images with integrity	17
5. What can we learn from these issues?	17
6. Why genuine astrophotos should be respected for the value they represent	18
7. Other examples of ethical issues in astrophotography (and astronomy related areas)	18
8. Broader examples of ethical issues in astrophotography	
9. The opinion of photographers	
10. Your choice	
11. Sources	
Attachment 1, Celestial Visions Statement of Values	23

1. A critique of ethical issues in astrophotography

What is ethics in astrophotography, and why are these issues important? Consider the following questions:

- Are fake astrophotography images acceptable?
- Is it OK to use other people's images with no permission?
- Is it OK to use other people's images, but not to acknowledge them?
- Can photographic competitions demand excessive and unreasonable usage rights?
- Is it ethical for competitions to claim high standards, but not to enforce those standards?
- What about fact checking?
- Is it OK to create deliberately deceptive images?
- Is it ethical to not resolve transgressions involving copyright breaches?

These issues represent a small example of the many ethical issues (and in many cases, legal issues) in contemporary astrophotography.

Ethics in photography have been examined by many authors. One introductory article is available on the photoethics.org web site, "Photography Ethics and Why They Matter", 25 April 2018. Podcasts on the subject are also available, see for example www.listennotes.com/podcasts/the-photo-ethics-podcast-photography-ethics-Cvblnk9hTBY/

Ethics in astrophotography is about the choices that you make.

Ethical behaviours include: Appropriate acknowledgement of other people's work. Respecting copyright and intellectual property. Open and honest communication. Fulfilling contracts. Justice. The use of valid assessment processes. Fact checking. Truthfulness and accuracy. Opposition to & rejection of unethical behaviour. Respect. Reconciliation. Inclusion. A willingness to listen and understand contrary views. A willingness to learn and develop.

Unethical behaviours include: Stealing other people's work. Taking the credit for other people's work. Deliberate deception or misrepresentation. The use of invalid assessment processes. Failing to acknowledgement other people's work. Disrespecting copyright. Breaching contracts and agreements. Deceitful behaviour. Misleading behaviour. Failure to resolve transgressions. Remaining silent in the face of unethical conduct or injustice. Intimidation or unjust threats. Excluding others. Obstructing due processes. An unwillingness to listen and understand contrary views. A refusal to learn and develop.

Behaviours that are neither ethical or unethical: Simple errors do not constitute unethical behaviour, particularly if they are promptly corrected.

This critique examines and investigates ethical issues, with a focus and case study on the book "Ancient Skies, Ancient Trees" by Beth Moon, to illustrate a number of these issues.

2. Advancing astrophotography

Astrophotographers can advance their skill and knowledge in the field of astrophotography, by the following;

- Develop a real and practical understanding and knowledge of astronomy, and how the night sky works.
- Develop and master the technical aspects of astrophotography, and methods of image processing.
- Develop good photographic techniques and methods that produce good quality, realistic images, images with integrity.
- Develop an understanding of the many astronomical phenomena, atmospheric phenomena, and optical / equipment related phenomena.
- Learn to critically appreciate astrophotographs.
- Develop a detailed appreciation of the photographic image, to distinguish between good, bad and outright faked images.
- Respect good astrophotography, celebrate it and encourage others with these broad goals.

This critique includes a series of quotes that illustrate important ethical considerations and views.

3. Copyright and Intellectual Property

Photographic images are one form of intellectual property, and they are protected by copyright. They have value, and should be managed as such. In Australia, copyright is defined in the Commonwealth Copyright Act 1968. This Act defines the legal protection of copyright content, such as photographs, and establishes certain permitted usages for copyright content. Copyright of photographs exists immediately upon the image being created, and the photographer is the copyright holder. Copyright (in the first instance) is not dependent upon registering an image, copyright is automatically in place to protect images. As the copyright holder, the photographer can control the use of their content, they can grant permission for the use of their content based on their own terms. If they so choose, they can give away their copyright content, they can licence it for specified uses, they can charge for that usage, and copyright can also be transferred to someone else (with copyright relinquished by the original photographer). Along with other forms of intellectual property, copyright images are assets. As defined by the Commonwealth Copyright Act 1968, there are some permitted uses of copyright content (i.e., "fair dealing", such as for review or criticism, research or study, news reporting, judicial proceedings, or parody / satire). Breaches of copyright can be subject to significant penalties. For further information about the Commonwealth Copyright Act 1968, refer to the many available online sources, including:

- https://www.legislation.gov.au/Details/C2017C00180
- https://en.wikipedia.org/wiki/Copyright_law_of_Australia
- https://anulib.anu.edu.au/files/guidance/copyright-regulations-notice.pdf

4. Ancient Skies, Ancient Trees.

4.1 The main purpose of the book

"Ancient Skies, Ancient Trees" is a photographic book authored by Beth Moon, published in 2016 by Abbeville Press. The book presents images of ancient trees at night, in conjunction with two contributed essays by Jana Grcevich and Clark Strand. As indicated by the author, Beth Moon, the intent behind the book "Ancient Skies, Ancient Trees", includes:

"My work photographing trees began in 1999, when I set out to record the lives of some of the oldest trees from different parts of the world.... This 14 year project was documented in my previous book Ancient Trees: Portraits of Time". (page 7).

"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.

The stated objective of using natural lighting later morphed into the use of artificial lighting ("light painting") of trees in her images.

In space, no one can hear you scream

Ridley Scott, Alien, 1979.

In space, no one can hear you scream, but at Astronomy WA we're always listening.

Astronomywa.net.au/contact

Sometimes I want to scream at all the injustice I see around me. Then I think it might be more fun to see what karma has in mind.

www.pinterest.com.au/pin/369013763189859937/

Never be afraid to raise your voice for honesty and truth and compassion against injustice and lying and greed. If people all over the world do this, it would change the Earth.

William Faukner www.quotescosmos.com

4.2 Some insights into the experience and technical competence of Beth Moon.

In relation to astronomy:

"My first journey to southern Africa for this project, on what I might call a celestial safari, left me speechless under a dazzling array of stars. I don't think I was prepared for the enormity of the universe laid out so starkly above me..." (page 7)

This quote clearly indicates an initial unfamiliarity with the night sky.

In relation to astrophotography....

"However, I was greatly surprised when I saw these new images on the viewfinder of my camera, and again on the next day when I reviewed them on a larger screen. The colour was so vivid!.... (page 8).

This comment indicates initial surprise by Beth Moon with colour in astrophotos. Any experienced astrophotographer should be aware of colour evident in the night sky and stars, as revealed via digital astrophotography.

On accuracy....

"I have adopted these names as titles to the images in this book. The stars and constellations referenced in the titles are not necessarily visible in the images; instead; I hope the titles will serve to inspire the viewers imagination" (page 8).

Source: "Ancient Skies, Ancient Trees" by Beth Moon.

This style of naming is certainly not a normal approach to the naming of images. Its style is more poetic rather than descriptive, but its approach of using well known meaningful names to title images that have no direct relevance or connection, is confusing and misleading.

4.3 What was published....

- "Ancient Skies Ancient Trees", ISBN 978-0-7892-1267-2
- 116 pages, hardcover book.
- 53 images
- 2 pages (only) of text by Beth Moon, page 7-8, plus 9 extended captions (multi-paragraphed) by Beth Moon, pages 98 108.
- Essays by Jana Grcevich and Clark Strand.
- A feature about the book was published on NationalGeographic.com.

4.4 Who was acknowledged?

In the acknowledgement section (page 112), no-one is specifically identified as the image processor, nor the software utilised. Beth Moon identifies herself as the photographer of all of the images in her book.

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/

There are two kinds of people,
those who do the work,
and those who take the credit.
Try to be in the first group;
there is less competition there.

Indira Gandhi www.brainyquote.com/quotes/indira_gandhi_109081

4.5 Praise for "Ancient Skies, Ancient Trees"

Extracts of endorsements and praise regarding "ancient Skies Ancient Trees" is detailed on Beth Moon's web site, refer to https://bethmoon.com/books/. Examples are provided below. Note the text in red.

"Stunning photos of Africa's oldest trees, framed by starlight, "Diamond Nights" capture the surreal beauty of ancient trees after night fall. **– Smithsonian**

Africa's ancient trees, surrounded by a blanket of stars: Beth Moon's images of ancient trees, so stunning in their stature and grandeur, straddle the line between fantasy and reality. — *Wired*

"From quiver trees in the isolated deserts of Namibia to baobabs in the dry landscapes of Botswana, each portrait is a study against a night sky. Their solitary feeling reflects both their locations and their timeworn growth beneath the glow of the Milky Way." —*Hyperallergic*

"The resulting images show awe-inspiring Tolkienian landscapes photographed in such sharp detail that when reproduced on the page they have the texture of oil paintings. ... More than an art book for photographers or those interested in nature, Moon's latest book will captivate all." — Starred Review, *Publishers Weekly*

"Otherworldly is the best word to describe Beth Moon's latest offering... Ancient Skies, Ancient Trees allows readers to see the world in a new light." —**BookPage**

"[Opens] our eyes to the glowing universe beyond." —San Francisco Chronicle

"There's a haunting connection between trees and the night sky that brings a powerful charge to photographer Beth Moon's book *Ancient Skies*, *Ancient Trees*." —*National Examiner*

"An ode to trees" — Pasatiempo, Santa Fe New Mexican

"In delicately colored long-exposure images, old-growth trees frame skies that are bright with stars. From South Africa to California, Moon recorded baobabs, quiver trees, bristlecone pines, Joshua trees, sequoias and oaks, lit by the Milky Way and constellations in the Southern and Northern hemispheres." —*Photo District News*

"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

"A vivid expression of the natural world's enduring beauty." —Atlas Obscura

"It's easy to feel young when you're staring at 6,000-year-old trees set against the dreamy backdrop of billion-year-old starry skies. Maybe that's what Beth Moon was trying to do when she went on a globetrotting quest to capture the oldest and most awesome trees on earth." — **Escapism**

"In Moon's beautiful shots, the Milky Way spills in a brilliant ripple across velvety skies." — *Entertainment Weekly*"

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

But note what is not featured on Beth Moon's web site; no acknowledgment of the National Geographic controversy (see section 4.7 below), and no apology....

At least three of the above glowing endorsements, directly raises the question of whether the images portrayed are "reality", and one of those endorsements provides positive reinforcement that they are.

4.6 A critical review of images, and issues emerge

- Page 72 and 73. Large variation in colour balance.
- Page 78, 82, 83, 85. Large discrepancy between image sharpness (Substantial spherical lens aberration) visible in star images, whilst tree image looks exceptionally sharp. Not a focus issue. Spherical aberration increasingly affects a photographic image the further from the optical centre of the image. Hence spherical aberration is typically at its most extreme in the corners of images. The tree portion of the image is sharp, whilst the background star images show significant spherical aberration. This is strong evidence of some kind of composite image based on two different image sharpnesses.
- Page 84. Major image cloning / image duplication.
- Page 86. Non-realistic sky: the Small Magellanic Cloud is not position in the way represented, in relation to the portion of the Milky Way. This image is clearly incorrect.
- Page 88. No atmospheric attenuation visible in the sky portion of the image.
- Page 92. Image processing defects visible.

4.7 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/

If you are neutral in situations of injustice, you have chosen the side of the oppressor.

Desmond Tutu

www.brainyquote.com/quotes/indira_gandhi_109081

There are no secrets that time does not reveal.

Jean Racine www.brainyquote.com/quotes/jean_racine_398801

4.8 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/

4.9 The response by 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

The statement by National Geographic that "we are unable to make a determination at this time" is very odd. As no update has subsequently been issued about this aspect, it can only be assumed that National Geographic still are "unable to make a determination". And yet, it is very simple to conclusively show that at least some of Beth Moon's images contain substantial image cloning or duplication, and that the resulting images bears no relation to reality and is clearly not realistic. For example, the image on page 84 is an example of an exceptionally poorly processed image.

What exactly are the National Geographic standards referred to?

Why could National Geographic not "make a determination" or were they simply unwilling to make a "public" determination?

"The answer to injustice is not to silence the critic, but to end the injustice".

Paul Robeson www.kidadl.com/articles/top-injustice

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

Theodore Rooservelt

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

4.10 Aftermath, the response by 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/

This quote reveals a lot. Using an un-named, un-acknowledged intern for image processing? With an unspecified process? Claiming a clone tool was not used, without acknowledging the clear examples of duplicated portions of the image? Not good. Cloning or duplicated images in a photograph can occur for more than one reason, it can occur because it has been cloned (e.g. using the clone tool in Photoshop), or it can be caused by defective image processing using photomosaic software (generally because the original images used have caused the issue). There could be other reasons why "cloned" or "duplicated" parts of an image exist in an image-processed photograph. For the author, Beth Moon, to not acknowledge the simple fact that cloning / duplication is present in her images reveals either a lack of technical understanding (already admitted by Moon), a deliberate ignoring of the issue, or outright deception.

Regarding the following admission by Beth Moon;

"First, I want to say that I am not much for technical expertise".

That statement should ring alarm bells, because it is the technical capability of astrophotographers which is a fundamental basis for determining the quality and value of their work. That statement strongly indicates a lack of knowledge and experience, or even concern, regarding the technical aspects of astrophotography.

There are three things in the world that deserve no mercy, hypocrisy, fraud and tyranny.

Frederick William Robertson Brainyquote.com

Lands of great discoveries are also lands of great injustices

Ivo Andric

www.goodreads.com/quotes/375536-lands-of-great-discoveries-are-also-lands-of-great-injustices

4.11 What went wrong with the National Geographic photo selection process?

The issues of Beth Moon's images are one aspect of this topic. The other major aspect is why did National Geographic not recognise and detect the issues before online publication?

What kind of image checking protocol did National Geographic have at that time?

Why did that process fail to recognise what to any informed astrophotographer is a blatently wrongly image processed image?

4.12 "anything goes" for arts sake VS images with integrity

An argument is sometime put forward that anything should go in the field of astrophotography, because otherwise, that would limit the creative freedom and freedom of expression of photographers. But that is exactly what the issue is about. "art" images, when presented out of context, directly cause misrepresentation and can foster mis-understanding. In all cases, photographic images exist within a purpose related context. If the photographic purpose is documentary photography (e.g. news reportage), then image manipulation goes directly against the principles of documentary photography. The same is the case for photography used for scientific purposes, where the integrity and validity of data is of the utmost importance. Further, for photographic images that used for evidence in a court of law, the integrity of the image is absolutely essential. Image manipulation is tantamount to fraud, misrepresentation and deception. If a photographic image is used in the context of "art", then the imagination can have free reign, but the viewer needs to be under no allusions that what they are seeing is "real". So the purpose and context of images is actually of the utmost importance.

5. What can we learn from these issues?

- 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 (e.g. 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 of stars are not just random dots. There is an enormous amount of information known about stars, and images can be precisely analysed to detect errors, faulty image processing or falsifications.

- A caution about the use of language. For claims of FAKE images, this is somewhat
 dependant upon the intent of the photographer, which only the photographer can
 truly reveal. Many photomosaic images contain image defects / defective image
 processing. That does not mean they are deliberate fakes. They can simply be
 poorly processed images. But all images can be analysed and assessed to the
 degree in which they represent "reality".
- "Reality" does not equal, "what I can see". There is more to reality that what our limited human vision can see. (e.g. infra-red, ultra-violet, etc). So the yard stick of "does the image match realistically what I see" actually is not a particularly good yard stick to judge astro-images.
- 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.

6. Why genuine astrophotos should be respected for the value they represent....

Because:

- astrophotographers go to a lot of trouble and effort to achieve genuine images.
- genuine astrophotos 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.

7. Other examples of ethical issues in astrophotography (and astronomy related areas)

- During my management of, and curation of more than 40 astrophotography exhibitions, over the last 35 years, I've directly observed a number of unethical images, that have been submitted for consideration. One ludicrous example, is that of a wide-angle image of the Milky Way, manipulated using image processing software, cloning parts of the Milky Way to form the image of a naked woman. It is quite astonishing to me that some astrophotographers seem to think that outright fraudulent images are an acceptable form of entry into astrophotography exhibitions. Needless to say, that specific entry was rejected.
- The many, many examples of satellites being identified in astrophotographs as meteors. This is primarily an issue of misrepresentation, or at best, an issue of misidentification. This issue has occurred many times in news media, where correct

identifications should occur, but too often does not, and also, even in the case of museum and gallery exhibitions.

- Perth International Airport. International Arrivals Hall. The "Seven Sisters and the Hunter" artwork. Represented as a northern hemisphere view (i.e. an upside down view) as compared to what is viewed from the southern latitude of -31 degrees.
- WA Museum "Emu in the sky" representation. Represented as a "constellation" formed by a pattern made of bright stars, which does not match the well-known understanding and special characteristic of the Emu, which is actually defined and formed via specific parts of the dark areas in the southern Milky Way.

8. Broader examples of ethical issues in astrophotography

The following are real-world generic examples of unethical conduct;

- Contractual breeches in which photographers are not acknowledged, despite being presented at so-called elite or professional galleries.
- "Professional" galleries that fail to apologise to photographers despite admitting to contractual breaches.
- Astro-turfing; The use of astronomy festivals supposedly as celebratory community astronomy events, which actually are dominated by corporate or academic interests.
- The practice of secrecy, closing off of communication, and refusal to respond to reasonable questions.
- Major award applications that contain false and misleading claims.
- Not distributing cash prizes to the rightful recipients, based on a fair and equitable distribution to acknowledge their contribution.
- Committee chairpersons who act with no committee endorsement or valid authorisation, who make defamatory and false accusations, judgements and penalties, before even seeking input for the party concerned.
- Failure to consult with the astrophotography community, on matters that directly affect astrophotographers.
- Publicly funded staff who fail to answer reasonable questions.
- Award processes that claim to require or expect high ethical conduct, but then fail to conduct any fact checking of claims made in award applications, or otherwise fail to detect misleading or false claims.
- Abuses of due-process by "management committees".
- Management committees that rely on anonymous responses "from the committee" without identifying who they are.

Injustice,
in the end,
produces
independence

Voltaire

www.brainyquote.com/quotes/voltaire_145528

I have always believed that on important issues, the leaders must lead.
Where leaders fail to lead, and people are really concerned about it, the people will take the lead and make the leaders follow.

Kofi Atta Annan

www.kofiannanfoundation.org/in-the-news/if-leaders-fail-people-will-lead-kofi-annan/

9. The opinion of photographers

At the October 2021 meeting of the Melville Photography Club (Western Australia), the opinion of members was sought on the following question:

Question. Should you be acknowledged if your photograph is featured in a gallery

exhibition?

Answer. 100% YES. (22 respondents).

10. Your choice

- Respect copyright.
- Respect contractual agreements.
- Acknowledge photographers.
- Ensure valid permissions are in place before usage.
- Protect and value your own intellectual property and copyright.
- Support those initiatives, exhibitions and organisations that demonstrate, live up to and uphold high ethical standards.
- For those astrophotography "competitions" that do not demonstrate good ethical conduct, boycott them, and do not enter them.
- Educate yourself about copyright and ethics in astrophotography.
- Call out examples of poor conduct, based on facts and rational analysis.
- For astrophotographers, learn good photographic practices, and apply them, and continue to develop your skill and abilities.
- When you encounter images that mis-represent, or are deliberately false or fraudulent, do not propagate or disseminate them via social media.
- Support or endorse the Celestial Visions Statement of Values (e.g., attachment 1).

Quoted text in this critique is used on the basis of fair use for the purpose of review, criticism and research. The information, commentary and critique provided in this document are the opinions of the author and do not constitute legal or technical advice. It is the responsibility of readers to inform themselves regarding any legal or technical aspects that they may rely on.

11. Sources

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

"Ancient Skies, Ancient Trees". https://bethmoon.com/books/

"Fake sky images' outrage astrophotographers". May 10, 2019. https://www.insideimaging.com.au/2019/fake-sky-photos-outrage-astrophotographers/

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

"Statement of Values" (Celestial Visions). www.celestialvisions.com.au Viewed 28 October 2021.

Copyright Act 1968 https://www.legislation.gov.au/Details/C2017C00180 Viewed 28 October 2021.

Copyright law of Australia https://en.wikipedia.org/wiki/Copyright_law_of_Australia Viewed 28 October 2021.

Commonwealth of Australia Copyright Act 1968 Notice about the reproduction of works and the copying of published editions (nd) https://anulib.anu.edu.au/files/guidance/copyright-regulations-notice.pdf

"Photography Ethics and Why They Matter", 25 April 2018. https://www.photoethics.org/content/2018/5/31/photography-ethics-and-why-they-matter

"Photo Ethics Podcast" https://www.listennotes.com/podcasts/the-photo-ethics-podcast-photography-ethics-CvbInk9hTBY/

Attachment 1, Celestial Visions Statement of Values

Celestial Visions and its founder, Dr John Goldsmith, is proud to contribute towards the advancement of astrophotography and astrophotographers, by the promotion of images with integrity, the encouragement of good photographic practices, the recognition of the work of photographers, and the showcasing and celebration of photography. With this context, Celestial Visions has articulated the following statements of values.

- We respect the efforts of astrophotographers, we value and promote astrophotography.
- We respect copyright and intellectual property at all times, and as per agreements, correct attribution to recognise photographers.
- We encourage collaborative working together based on informed agreement, informed consent, within our communities from local to global scale.
- Contractual agreements to be respected by all parties.
- Open, honest communication, valuing facts, accuracy, truthfulness and just processes.
- We respect the efforts and achievements of our past community

members, we honour our contemporary astrophotographers and we encourage the advancement of future astrophotographers.

- We value the importance of the natural night sky, free from excessive human interference and disturbance, including protection of dark sky environments / avoiding light pollution and excessive impact from satellites.
- We value astro-images with integrity, images that are realistic representations of the cosmos, free of misrepresentation or manipulation.
- We value and recognise the role of creativity in astrophotography (or digital art), but that context is needed to avoid misrepresentation or misapplication.
- We are mindful of the communities and the natural environment in which we operate, with the aim of encouraging positive outcomes and avoiding negative impacts on communities or environments.
- We support justice and remediation where copyright, intellectual property or agreements are not respected by other parties.