



Land Knowings, Lessons and Truths: Indigenous Tellings of Change, Adaptation and Restoration

CSSRM: Adapting to Change: Avoid, Reduce, Restore

October 7, 2021

Dr. Doreen E. Martinez

SCIENCE

Why Scientists Are Starting to Care About Cultures That Talk to Whales

Arctic people have been communicating with cetaceans for centuries. The rest of the world is finally listening in

Krista Langlois, Hakai Magazine

April 6, 2018



"Tattooed Whale, 2016" by Tim Pitsiulak. Screen-print on Arches Cover Black. Reproduced with the permission of Dorset Fine Arts

https://www.smithsonianmag.com/science/talking-to-whales-180968698/?fbclid=IwAR2xHfbrL-At1d_4emXyZZH-lwi3qz_HpFUSr3jr3pWmZtxJtSu7JdSzVNg

From the Himalayas to the Arctic, traditional herders are sharing knowledge to cope with a changing climate

Yak, reindeer and entire ways of life in the “Third Pole” and Scandinavia face new threats in a warming world. Gloria Dickie reports.





ILLUSTRATION BY LUISA RIVERA/YALE E360

Native Knowledge: What Ecologists Are Learning from Indigenous People

From Alaska to Australia, scientists are turning to the knowledge of traditional people for a deeper understanding of the natural world. What they are learning is helping them discover more about everything from melting Arctic ice, to protecting fish stocks, to controlling wildfires.

BY JIM ROBBINS • APRIL 26, 2018

<https://e360.yale.edu/features/native-knowledge-what-ecologists-are-learning-from-indigenous-people?>



Researchers uncover evidence of Indigenous aquaculture 3,500 years ago

Ancient Indigenous clam gardens off northern Quadra Island have been dated by researchers to be at least 3,500 years old – 2,000 years older than previously thought.

The study by archeologists from Simon Fraser University (SFU) and the Hakai Institute, a B.C. scientific research centre, provides valuable data on the human-built rock walls known as clam gardens. The walls, used to farm clams along tidal zones, are hidden under the high tide and provide an ideal habitat for the mollusks.

“Some of these walls were built 3,500 years ago and continue to be used.” said Dana Lepofsky, lead author of the study and professor at Simon Fraser’s department of archeology.

Using a combination of radiocarbon dating and historic sea-level mapping, researchers have been able to date the clam gardens, Prof. Lepofsky said.

How do we know what we know?

🕒 FEBRUARY 27, 2019

Indigenous knowledge key to a successful ecosystem restoration

by Autonomous University of Barcelona



Credit: CC0 Public Domain

Ecological restoration projects actively involving indigenous peoples and local communities are more successful. This is the



Land Knowings, Lessons and Truths

- ▶ Indigenous Epistemologies
 - ▶ Seeing
 - ▶ Being-with (relatives and responsibilities; dirty theory)
- ▶ Natural Reason and Natural Law
 - ▶ Land as Pedagogy: learn *from* and learn *with*
- ▶ Deep logic and deep co-existence
 - ▶ snow

Knowing through Seeing through Being-With

<https://www.sbs.com.au/nitv/nitv-news/article/2018/10/19/resonances-between-indigenous-art-and-images-captured-microscopes?>

19 OCT 2018 - 4:24PM

The resonances between Indigenous art and images captured by microscopes



IMAGE

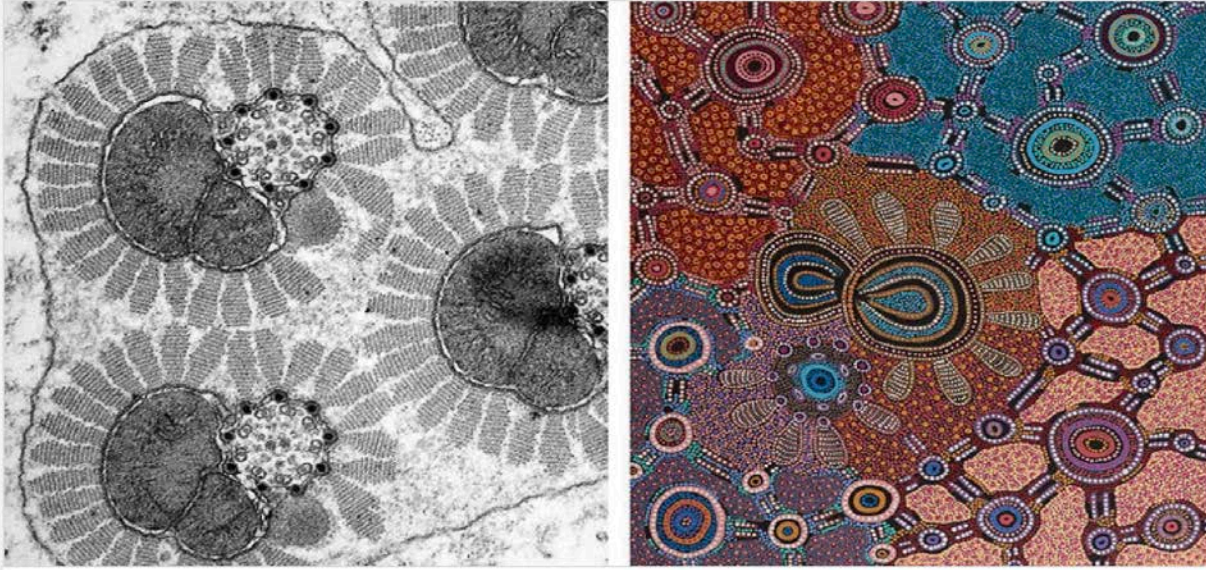
VIDEO

AUDIO

A new exhibition pairs paintings by Indigenous Australian artists with microscopic images captured by scientists. The parallels are intriguing.

Bimoo country (artist Gordon Barney) and white ochre

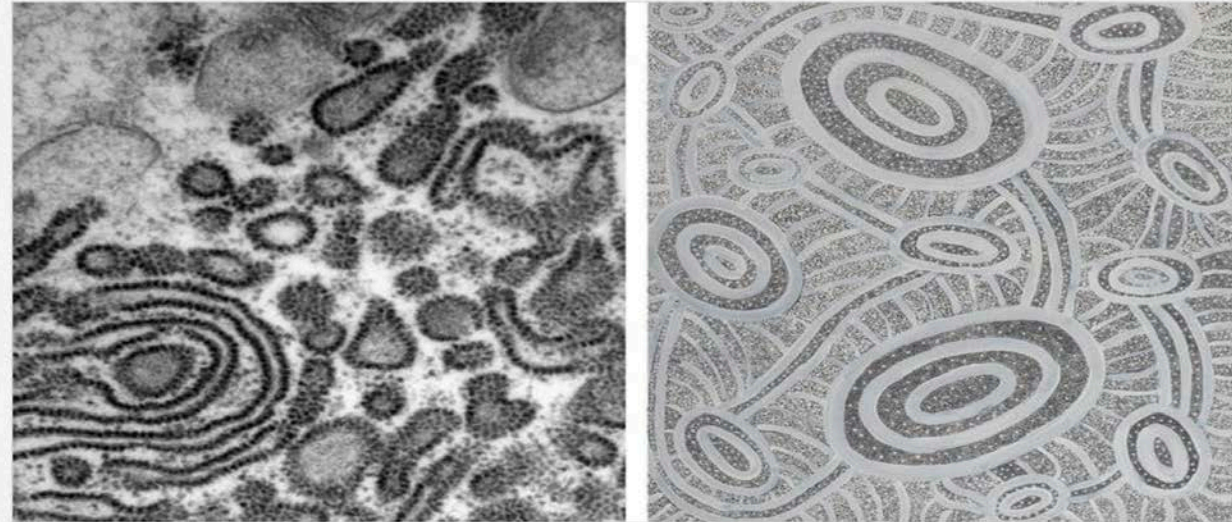
The overlapping plates of the ochre mineral are reminiscent of the rows of hills in Gordon's country.



Moth Sperm and Witchetty Grub Dreaming.

Witchetty grub dreaming (artist Jennifer Napaljarri Lewis) and moth sperm

Jennifer's painting shows women collecting witchetty grubs. These can be eaten at all stages of their life cycles. Without the structures shown in the micrograph, sperm wouldn't function and moths' life cycle would be broken.

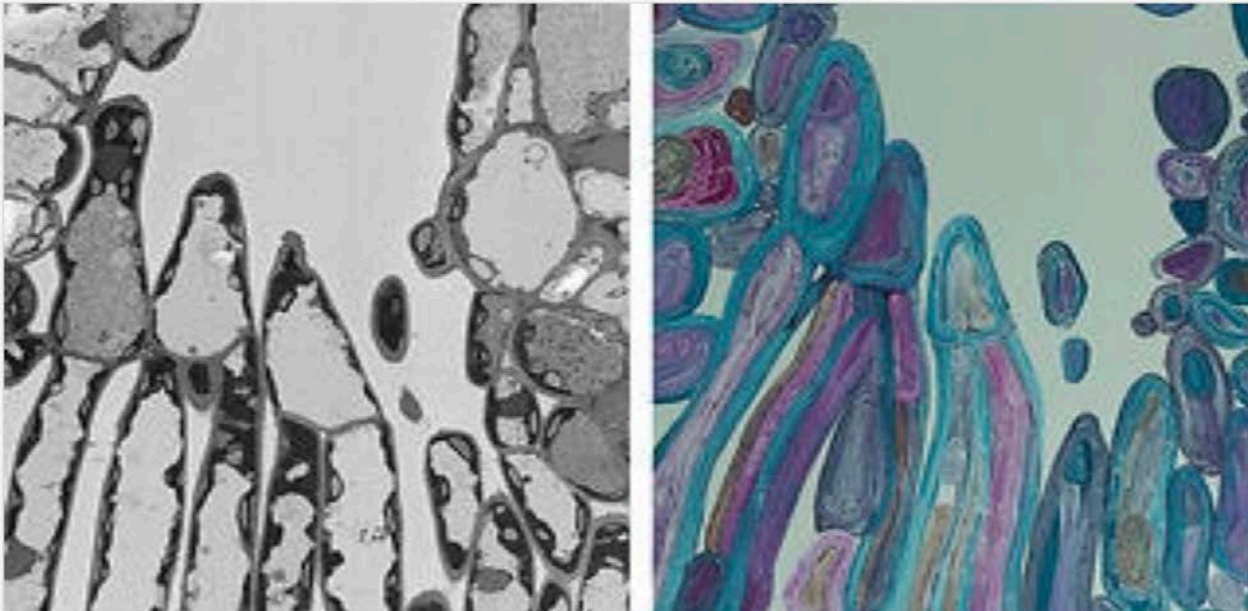


Ribosomes and Janganpa Jukurpa.

Source: University of Sydney/Warlukurlangu Artists of Yuendumu

Sandhills dreaming (artist Vanessa Nampijinpa Brown) and atoms in quartz

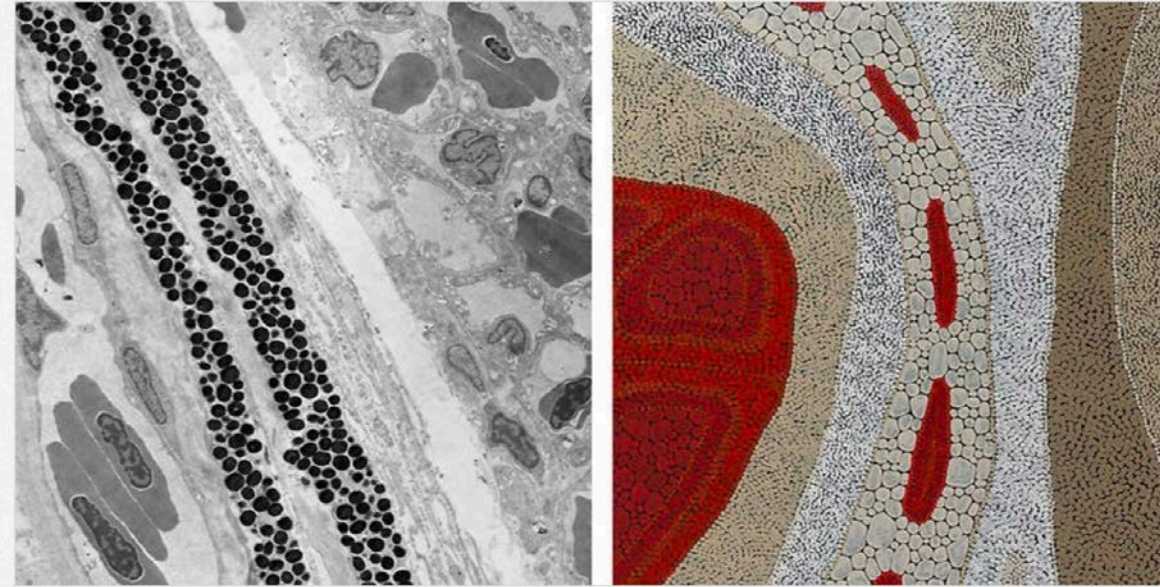
The crystal structure revealed in the micrograph is fundamental to the sand making up the sandhills that Vanessa paints in her story.



Gum Leaf and Gathering Bush Tucker.

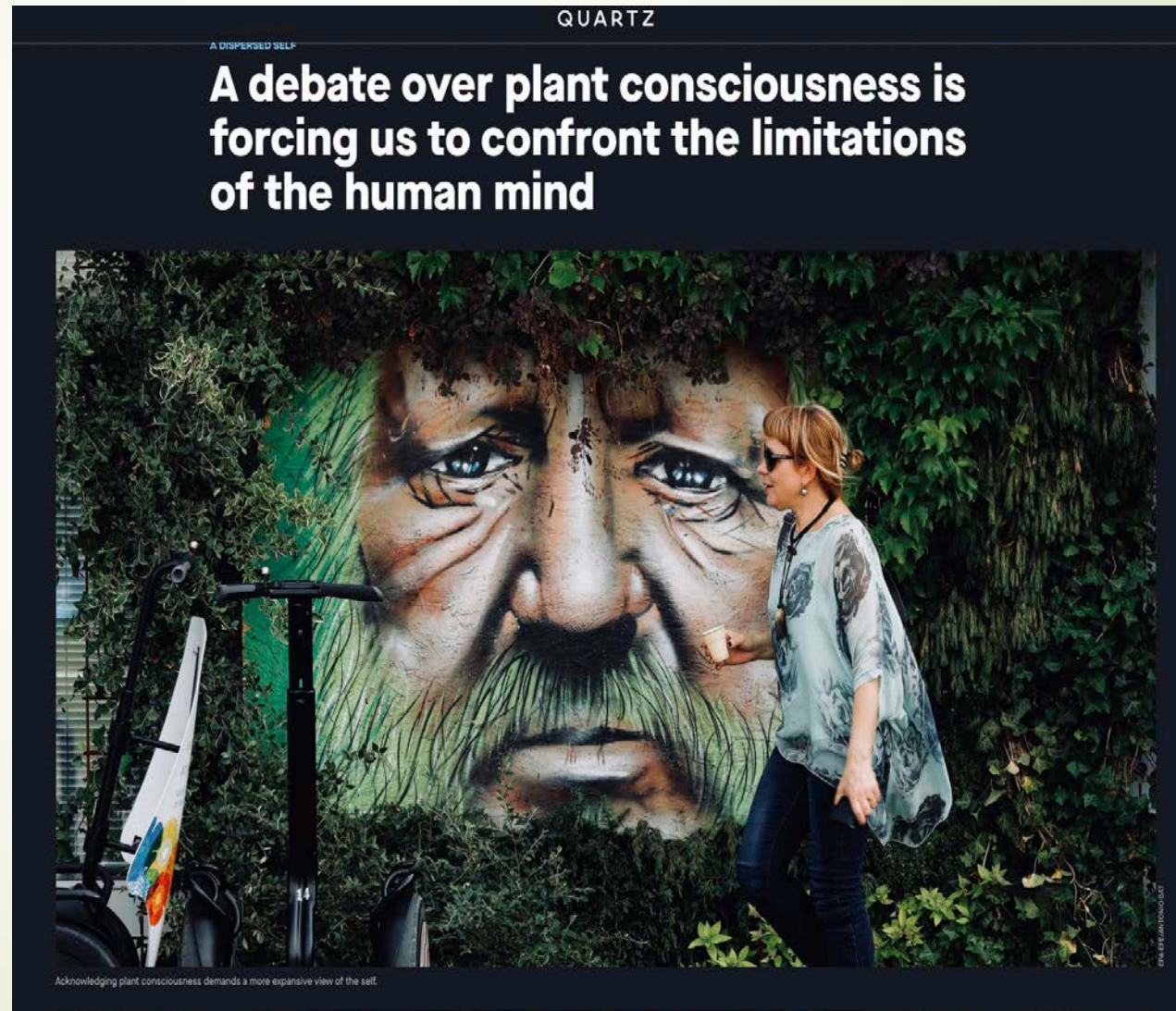
Gathering bush tucker (artist Kerry Madawyn McCarthy) and gum leaf cells

The cells in this gum leaf are reminiscent of the rocks and coastal landscape of Kerry's painting. Her people move through the landscape to collect food just as carbon dioxide moves through the leaf spaces to cells, where it is converted to food for the plant.



Fish Eye – Blood Flow and Dry River Bed.

Feed the Curious: the Great Mystery



<https://qz.com/1294941/a-debate-over-plant-consciousness-is-forcing-us-to-confront-the-limitations-of-the-human-mind/>

'We come from the stars': How Indigenous peoples are taking back astronomy



Astronomers turn to teaching Indigenous star stories from around the world



[Nicole Mortillaro](#) · CBC News · Posted: Mar 30, 2019 4:00 AM ET | Last Updated: March 30, 2019



The northern lights shine over Wood Buffalo National Park during the Thebacha and Wood Buffalo Astronomical Society's Dark-Sky Festival. (Nicole Mortillaro/CBC)

Deep coexistence

<https://www.cbc.ca/news/science/indigenous-astronomy-1.5077070?>

Buffalo Restoration Project

Eastern Shoshone and Northern Arapaho

Wind River Reservation: Rachel Green and Dr. Doreen E. Martinez



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New research reveals spatial alignment between grizzly bear genetic groups and Indigenous language families in coastal British Columbia

Released on August 3, 2021



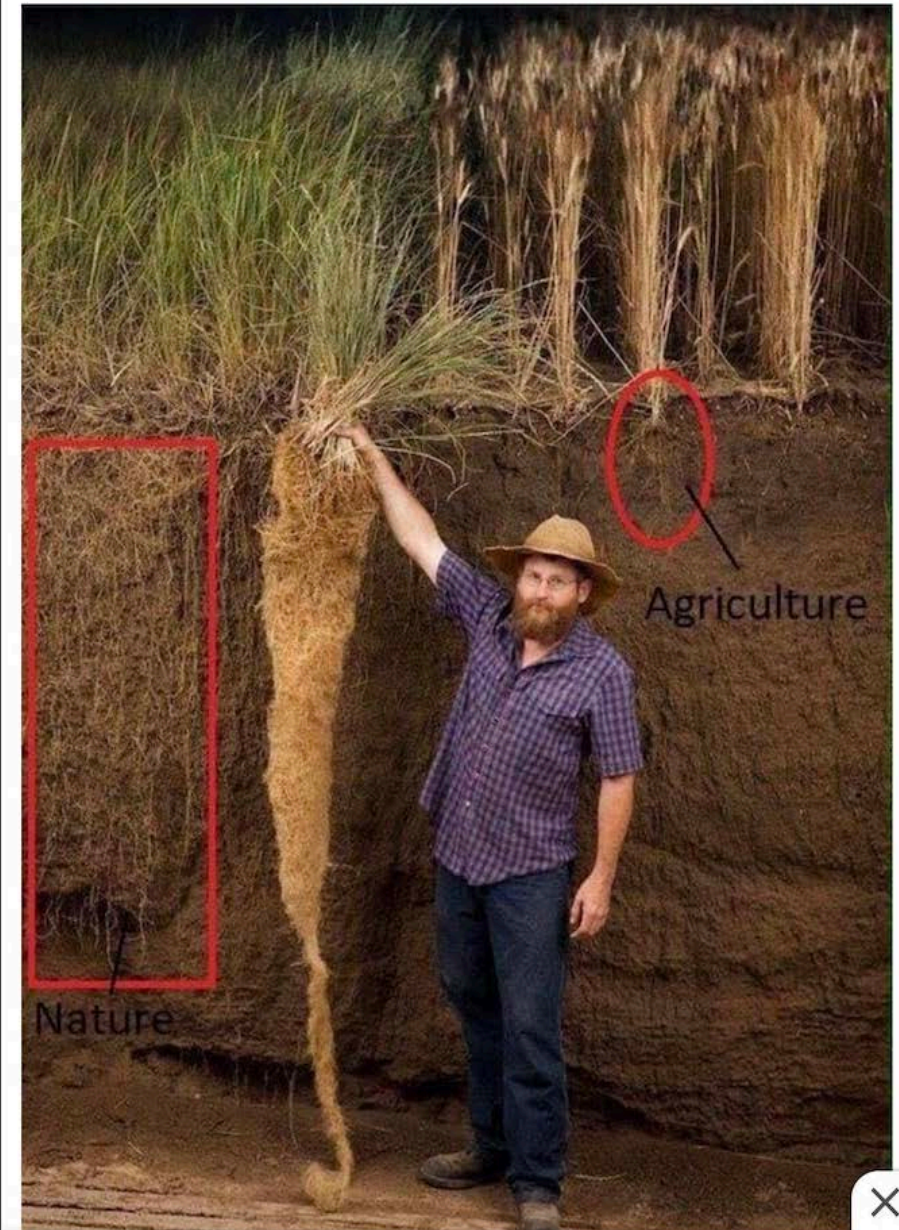
Photo by Michelle Valberg.

<https://www.raincoast.org/press/2021/spatial-alignment-between-grizzly-bear-genetic-groups-indigenous-language-families-coastal-bc/>

Land Knowings, Lessons and Truths

- Agriculture
 - Agriculture heritage
 - Land practices
- Acre
- Salmon

11. Comparison of the root system of prairie grass vs agricultural. The removal of these root systems is what lead to the dust bowl when drought arrived.





Indigenous Tellings of Change, Adaptation and Restoration


- Tellings
 - who are your knowers
 - Where is knowing offered?
 - Land tellings (land is more than land)
- Change as adaptation as natural, necessary
- Exponential realities

Avoid knowledge extraction

THE CONVERSATION
Academic rigor, journalistic flair

Q Search analysis, research, academics...

COVID-19 Arts + Culture Economy + Business Education Environment + Energy Ethics + Religion Health Politics + Society **Science + Technology**

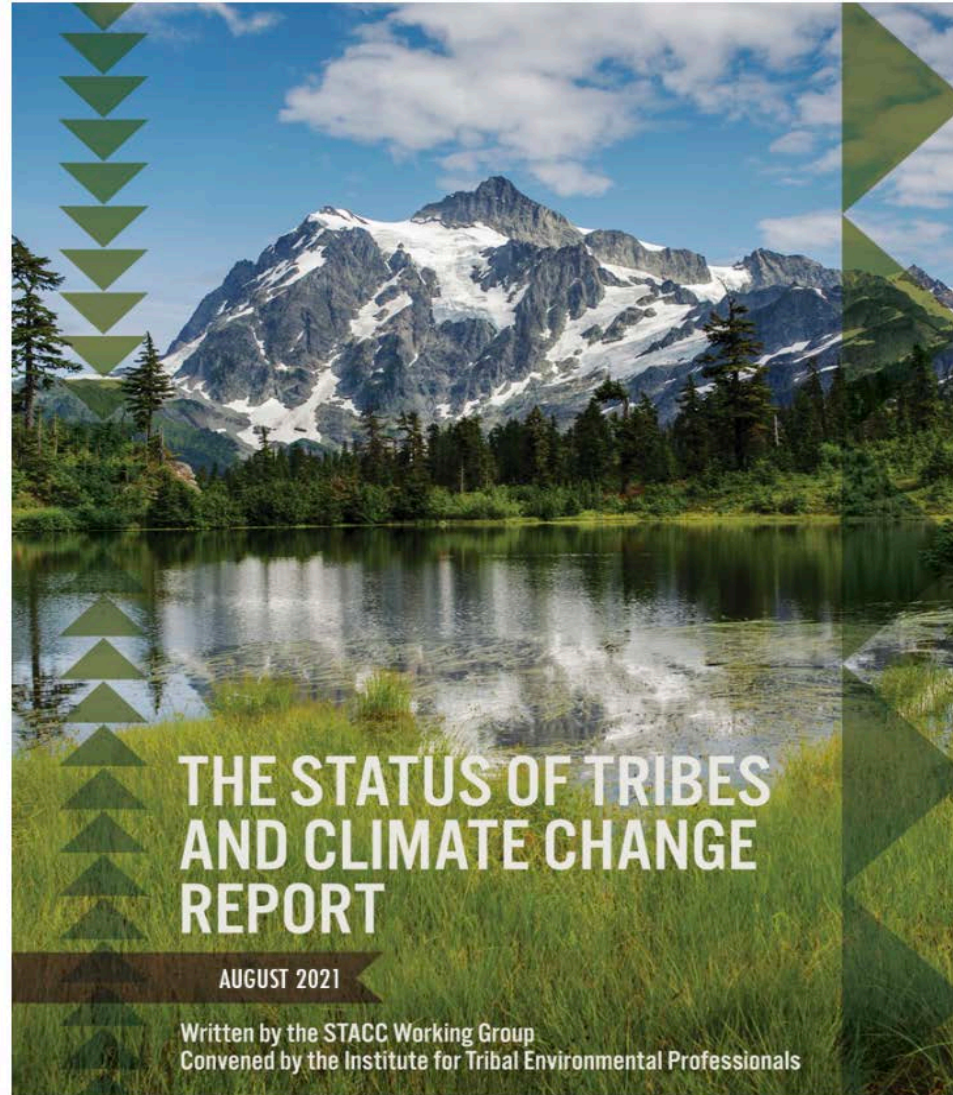


An uneasy alliance: Indigenous Traditional Knowledge enriches science

February 18, 2019 10:58am EST Updated February 27, 2019 9:03pm EST

<https://theconversation.com/an-uneasy-alliance-indigenous-traditional-knowledge-enriches-science-109212>

Knowings and Adaptation



<https://sites.google.com/view/stacc2021-itep/how-to-access-report>

Knowings and Adaptation


Indigenous Peoples launch self-determined agenda at IUCN World Conservation Congress

Marseille, France, 03 September 2021 (IUCN) – IUCN's Indigenous Peoples Member Organisations today called for the recognition of Indigenous peoples' rights and governance over their lands and resources. The call is part of a global agenda of Indigenous priorities for conservation action that was presented during the IUCN World Summit of Indigenous Peoples and Nature, held at the IUCN World Conservation Congress in Marseille.

PRESS RELEASES



<https://www.iucncongress2020.org/newsroom/all-news/indigenous-peoples-launch-self-determined-agenda-iucn-world-conservation-congress>



Adaptation through Voice and Resistance and Practice



Questions?



RAYMOND HENNESSY / BIRD PHOTOGRAPHER OF THE YEAR