

Indigenous Astronomy, communicating back to communities what belongs to them



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Research practice and the death of Indigenous Astronomy, the case of the central Karoo

Paper will be published in a book 2024

The Authoritative Guide to South African Indigenous Knowledge Systems for Teachers. Via Africa



Introduction

Indigenous Astronomy

South Africa has several different Indigenous astronomies. This study looked at one of the older Indigenous astronomies. Bleek and Lloyd(1830-1880) documented many Xam Bushmen stories. Scholars like Jose Manuel de Prada-Samper, John Parkington, David Morris, Niel Rush, and Jarita Holbrook, to name a few, extensively researched these stories.

Thus, the expectation is that it would be easy to find and document the stories told over the last 5000 years.



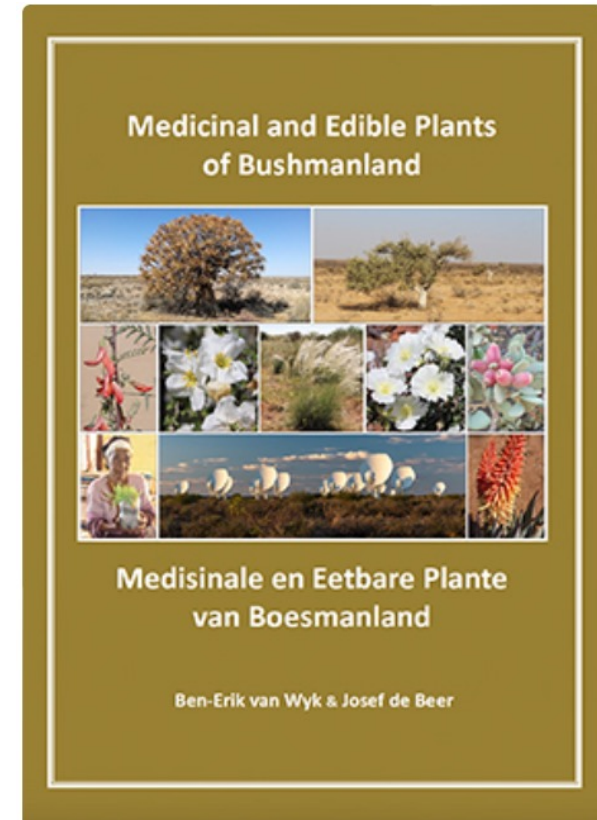
Introduction

A lot is written about indigenous astronomy in the area.

The research conducted for this paper was to document the Indigenous stories told in the area.

This would then be distributed to local communities at no cost

We have done this before with Medicinal plants.



Medicinal plant study

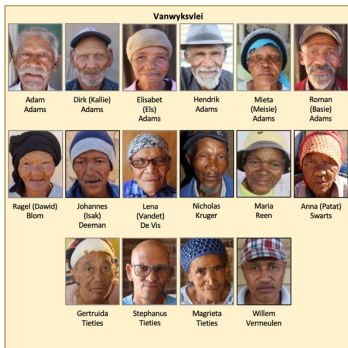
Introduction

Medicinal and Edible Plants of Bushmanland



Medisinale en Eetbare Plante van Boesmanland

Ben-Erik van Wyk & Josef de Beer



CULTURAL CONTEXT • KULTURELE KONTEKS



A. View over Bushmanland near Vanwyksvlei/ uitsig oor Boesmanland naby Vanwyksvlei; B, traditional mud house at Swartkop/ tradisionele modderhuis by Swartkop; C, outside broom made from *biesepol* (*Afroscripoides dioica*)/ werfbesem gemaak van biesepol (*Afroscripoides dioica*); D, deserted house, north of Carnarvon/ verlate huis, noord van Carnarvon; E, baking bread in the outside oven/ broodbak in die buite-oon; F, G, rock engraving/ rotsgrawures; H, outside kitchen at Swartkop/ kookskerm by Swartkop; I, Brandvlei participants/ Brandvlei deelnemers; J, Carnarvon participants/ Carnarvon deelnemers; K, Williston participants/ Williston deelnemers

The *Xam* people of the Nama-Karoo are, according to genetic evidence, the oldest cultural group on earth. The precious veld lore that they have passed on to their descendants and to other cultural groups is therefore of global importance and must be preserved for the benefit of all humanity. About 2000 years ago, nomadic Khoi herders moved into the Karoo and practised transhumance to reach the best grazing for their animals. Since the 17th century, the Karoo has been colonised by Europeans and became to a large extent culturally integrated with the local population. In this way a unique lifestyle developed, based on livestock farming (especially sheep). Afrikaans almost completely replaced San and Khoi languages. The

Xam mense van die Nama-Karoo is volgens genetiese getuienis die oudste kulturele groep op aarde. Die kosbare veldkennis wat hulle aan hul nageslagte en aan ander kultuurgroepe oorgedra het is dus van globale belang en moet vir die mensdom bewaar word. Ongeveer 2000 jaar gelede het nomadiese Khoi herders in die Karoo inbeweeg en rondgetrek in seisoenale siklusse om die beste weiding vir hul diere te bereik. Sedert die 17^{de} eeu, het Europeaners die Karoo gekoloniseer en in 'n groot mate kultureel vermeng met die plaaslike bevolking. Sodanig het 'n unieke leefwyse ontwikkel, gebaseer op vee-boerdery (veral skaap). Afrikaans het die San en Khoelale hoofsaaklik verplaas en die dominante

kraalaalwyn • kraal aloë

Aloe claviflora



Kraalaalwyn (*Aloe claviflora*): A, B, flowering plants/ blomnende plante; C, kraal of aloë/ kraal van aalwyn; D, bitteraalwyn (*Aloe ferox*): plant in flower / plant in blom; E, aloe lump and aloe powder / aalwyn klonte en aalwyn sap

The 'kral aloë' can easily be recognized by the inflorescences that are usually borne horizontally, hence the Afrikaans name *kanonaalwyn* ("canon aloë") that is sometimes used. Another typical character is that the plant multiplies by side shoots (suckers) that gradually form a circle or kral.

Die kraalaalwyn kan maklik herken word aan die bloeiwyses wat gewoonlik horisontaal gedra word – vandaar die naam 'kanonaalwyn' wat soms gebruik word. 'n Ander tipiese kenmerk is dat die plant met behulp van sytakke (suikers) vermeerder en mettertyd 'n kring of kral vorm.

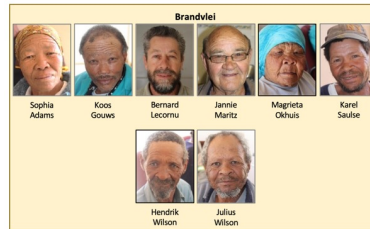
It appears that no uses have hitherto been recorded for this aloë. Infusions of the sap are taken orally at Swartkop to treat high blood pressure and diabetes. People at Brandvlei use the dried and powdered leaves against constipation. Leaves are chopped up and placed in the drinking water of chickens to treat a respiratory ailment called *piep*. The leaves and dried yellow sap of the bitter aloë of the southern Cape have similar uses.

Daar is skynbaar tot nou toe geen gebruik vir hierdie aalwyn aangeteken nie. By Swartkop word aftreksels van die sap gedrink om hoë bloeddruk en suikersiekte te behandel. By Brandvlei gebruik mense die gedroogte en verpoederde blare teen hardwyghied. Blare word gekerf en in hoenders se drinkwater geplaas om 'n respiratoriese siekte (*piep*) te behandel. Die bitteraalwyn of makalaalwyn van die Suid-Kaap het soortgelyke gebruik.

Die kraalaalwyn se natuurlike verspreiding is beperk tot Boesmanland en die Karoo.

1. *Aloe claviflora* Burch.

Asphodelaceae



Methodology

Adapted Ethno Astronomy

Based on the Medicinal plant study

Snowball sampling

Walking from home to home

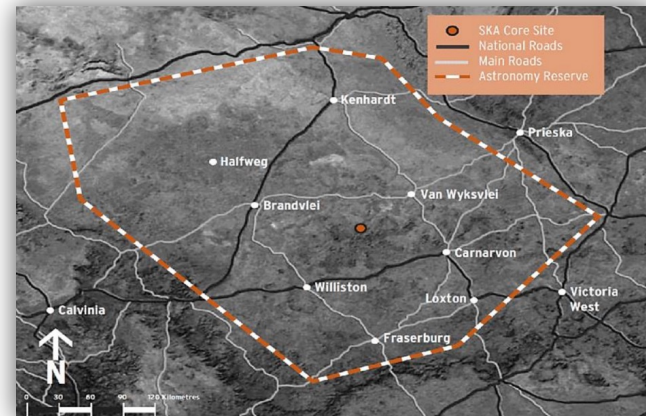
Astronomical objects were shown, and discussions facilitated

Towns included:

- Carnarvon
- Williston
- Vanwyksvlei
- Vosburg
- Loxton
- Swartkop



Exploring the moon



Research Area

Methodology

- Bleek and Lloyd tested stories

ACHERNAR Digging stick star
ALDEBARAN The male Hartebeest
ALPHA ORION (BETELGEUSE) The female Hartebeest
AQUILA The great star
CANOPIUS the Ant egg star
CASTOR AND POLLUX The Elands wife
CETUS the Orphan
CORONA AUSTRALIS The bush, hut, branch house, nest"
MAGELLAN CLOUDS Family of steenbok in this celestial body.
MILKY WAY This was made by one of the earliest Bushman girls, who threw ashes into the sky and ordered them to become the "Milky Way". She wanted a little light to be made so that the Bushmen would be able to return home (even) in the night; for, the earth, then, could not even be a little light; were it not for the Milky Way and the stars. The same girl also thought that she would throw up into the sky a certain root (which the Bushmen eat), so that it would become stars. The flesh of this root is, when young, white, and when old, red; - this makes some of the stars white, and others red." .
MOMO "A constellation round the moon (a lunar rainbow) is the dust made by a dancing party that ascends and surrounds the moon"
MOON The moon was created by a being called kaggen, who, once being inconvenienced by darkness, threw one of his shoes up into the sky to become the moon and to make light for him. The moon is red because the shoe was dusty with red dust, and cold because it is only skin (or leather). The moon is also looked upon as a male being; a man with whom the sun becomes angry (on account of his going out before him). The sun then stabs and cuts him with his (the sun's) knife, i.e. rays. These attacks are continued until the moon is reduced to a mere back-bone, which he entreats the sun to spare so that he may live to return home and see his children. "The Sun has mercy and spares the little piece, which goes home, and grows again to a full Moon; - when the stabbing and cutting process recommences. The wife and children of the Moon are in his house".
ORION Three female tortoises on a stick
PLEIADES "They are like Ostrich eggs; therefore, the Bushmen seek for Ostrich eggs, when they come out".
REGULUS or ALPHA LEONIS "Day's Heart's Child".
SIRIUS "to sing" and "honey",
SOUTHERN CROSS "Male Lions". The Lions themselves are Alpha and Beta Centauri, the Pointers as stated above. From all this one can deduce that the Xam saw in the Southern Cross, or at least in part of it, a pride of lions.
SUN "The Sun was a man; but not one of the early races of people [...] He only gave forth brightness for a space around his own dwelling. Before the children threw him up, he had not been in the sky, but had lived at his own house on earth. As his shining had been confined to a certain space at, and round his own dwelling, the rest of the country seemed as if the sky were very cloudy; as it looks now, when the Sun is behind thick clouds. The sky was black (dark?). The shining came from one of the Sun's armpits, as he lay with one arm lifted. When he put down his arm, darkness fell everywhere; when he lifted it up, it was as if day came. In the day, the Sun's light used to be white; but at night it was red, like a fire. When the Sun was thrown up into the sky it became round, and never was a man afterwards." Before being thrown into the sky, the Sun was called "Sun-armpit"
VENUS "the Day-break's Great Star".

Main findings

Indigenous Astronomy

Despite a massive amount of academically published work, very little to nothing remains of the Stories described by Bleak and Lloyd's informants.

From this, the title of this Paper

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Article May 2009 · 52 Reads · 5 Citations

English in Africa

Michael Wessels

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Peter Raper

/Xam is die taal wat gepraat is deur die /Xam-Boesmans wat binne menseheugenis suid van die Oranjerivier gewoon het, in die gebied wat vroeër bekend was as die Kaapkolonie. Mettertyd het Hollands en later Afrikaans hulle taal van voorkeur geword,...

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Mark Tridman

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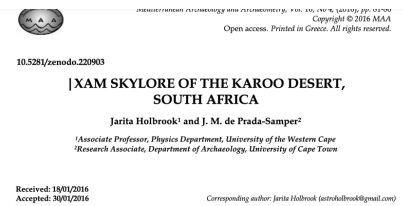
Research in African Literatures

Annie Gagiano

The "Xam narrative" referred to in the title of Michael Wessels's path-breaking work is found in the famous archive recorded by the German philologist Wilhelm Bleak and his English sister-in-law Lucy Lloyd in colonial Cape Town during the 1870s, when the Briti...

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ABSTRACT
The Square Kilometre Array (SKA) will be the largest radio telescope facility in Africa when it is completed which is estimated to be a decade into the future. The |Xam group of the San people of South Africa lived in the region of the Karoo Desert where the Square Kilometre Array is being built. Several European countries are part of the SKA collaboration (Spain, Sweden, Italy, the Netherlands, the United Kingdom, Portugal, Malta, France), Asian countries (China, India, Japan, and South Korea), the Americas (Brazil, USA, and Canada), Russia, Australia, New Zealand, and South Africa, making up 20 major partners (SKA Communications and Outreach Team, 2015). In the 1870s the folklore, cultural practices and way of life of the |Xam were documented through interviews with a handful of |Xam individuals, mostly men that were serving prison sentences in Cape Town. Considered extinct since the early 1900s, in 2011 de Prada-Samper discovered that |Xam folklore, although transformed, is alive in the Afrikaans-speaking 'Coloured' population in that region of the Province. In 2014 she also discovered the 'Bushman Letters' and decided to translate the selected one of them.



Some publications

Main findings

Stories Identified

The workshops and visits were facilitated over seven days in October 2023. The stories identified could be sorted into the following categories:

Nature Rhythms and Cycles

Ghosts and the spiritual dimension

Different versions of the Water Snake

Objects that move in the sky



The moon and the Sun explained

Stories

The Moon

The Vulture Flying into the Moon:

In Brandvlei, this story was told: A vulture once wanted to see how high and fast it could fly. While flying very fast and looking back to the Earth, the vulture crashed into the Moon. If we look at the moon today, we can still see the vulture's feathers sticking to it.

The Moon in predicting rain:

The participants told a few stories about the Moon and rain. They said that when there is a “moonbow”, it means that rain is close. This phenomenon is often observed in the area where a round “rainbow” appears around the full moon. When this happens, they know that planting time is close and that it will rain.



MeerKAT and the Hemel straat

Stories

Venus

The Evening and Morning Star:

This narrative is repeated most often by the Morning and Evening stars. Participants indicated that these “stars” showed a rhythm; it indicated when the day was about to start when the day would end, and when night would come. They said that this is also called Venus. This narrative is consistent with the documentation of Bleek and Lloyd and could be linked back to the Xam idea of a star that brings the day. Community members told stories of how parents and grandparents would wake them up to start their day when this star appeared.

Stories

False dawn or Zodiacal light and the “Waterslang” :

The Zodiacal light was described by participants as “Invaltyd”, or translated as a time to get started; the old people knew that this was the time to get up and make coffee. They were describing another rhythm that needs to be followed, like that indicated by the morning star.

More significant is the link to the story of the water snake or “Die Water Slang”. This story was told in some form in every community where workshops were held.

Recommendations

Researchers

Researchers have an ethical obligation to give knowledge collected back to the communities where it was collected. Otherwise research

Astro guide development

Carnarvon Astro Guides

Focused on Indigenous astronomy and stories documented

Cultural events

Screening of films like Aitsa

Cultural Astronomy Festivals October 2024

Regular discussions with Elders and knowledge-holders



Astro Guides

Karoo Dark-skies

