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THE FIRST KNOWN PAINTING OF THE AFRICAN RAIL?

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Abstract. San rock art depicting birds is generally identifiable to family level rather than species level. The San had a deep understanding of birds. Avian rock art interpretation is complicated by ‘avianthropes’, images that are part-human and part-bird. A rock art image in South Africa’s Langeberg foothills is interpreted as an avianthrope African rail. This may be the oldest known depiction of this species, probably predating the 1773 holotype painting. An African rail may have been a subject of interest for a San artist. Appreciation of the San as accomplished ornithologists can inform modern ornithology and southern African rock art.

Introduction

Within the magnificent corpus of San (Bushman) rock art from the Later Stone Age of southern Africa, images of birds are in the minority, except for the ostrich (*Struthio camelus*) (Rust 2008: 62; Low 2011; Morris 2017). However, ethnographic studies indicate that the San had an extensive understanding of the birds around them. For example Heinz (1978: 152), in a study of the !Ko in what is now western Botswana, noted that ‘The Bushman is the original scientist. The ornithological knowledge of birds of the Bushmen rests on a firm basis. We were able to obtain some 65 different names for the total of 77 birds seen during the course of these investigations’. Likewise, Sugawara (2001) noted 68 names for 76 bird species amongst the /Gui and //Gana. While we appreciate that historical and regional differences may have existed between groups of San, their rituals and spiritual beliefs have commonalities across regions (Biesele 1983; Lewis-Williams and Dowson 1989; Deacon and Deacon 1999), and such evocative 20th-century ethnographies from the Kalahari, although as much as 1000 km north of the site described below, are thus potentially relevant and valuable.

Birds were important in San mythology. Hollmann (2005a: 22) noted that ‘in some Bushman societies people interpret the behaviour of birds anthropomorphically’, quoting Silberbauer (1981: 72) with respect to the G/wi in the central Kalahari: ‘Credited with thought processes and values comparable with those of man, birds are thought to react to many situations in the same way man would ...’. Trance is a complex experience; one of the universal metaphors of altered consciousness is the ‘flight’ mode (Lewis-Williams and Dowson 1989), and birds depicted in the rock art may signify a ‘flight’ sensation as experienced in an altered state. Furthermore, Bleek (1935: 18) reported that (in

what is now South Africa’s Northern Cape province) a /Xam spiritual healer was known as a !*gi:xa*, who could transform himself into a bird when he wished to find out what was happening in a distant part of the country. Bleek’s informer, Dia!kwain, is quoted as stating: ‘At some other time, when we are liable to forget him, he turns into a little bird, he comes to see us where we live and flies about our heads. ... When we who are wise people hear him chirp like this as he flies away, we speak to him ...’ (Bleek 1935: 18–19).

In general, avian rock art images in southern Africa may be identifiable at the family level, or occasionally genus level, rather than the species level. Exceptions may occur when a bird species has an unmistakable and unique appearance, e.g., the ostrich, or when unique behaviour is depicted, such as the courtship display of a pair of bateleurs (*Terathopius ecaudatus*). Examples of avian rock art images we identify to the family level probably include kingfishers (Halcyonidae) and possibly herons (Ardeidae). In this regard, Hollmann (2005b) reported on behavioural postures and morphology in identifying hunter-gatherer rock paintings in the western and eastern Cape provinces.

For example, in the case of an image of a vertically diving avian image with a long, straight bill (Fig. 1a), both giant kingfisher (*Ceryle maxima*) and malachite kingfisher (*Alcedo cristata*), representing the ends of the size spectrum, are plausible species. Likewise, the image of a probable large heron (Fig. 1b) might represent a grey heron (*Ardea cinerea*), a blackheaded heron (*Ardea melanocephala*), or another candidate species. In contrast, in the case of ostriches, there are few other candidate species, even when the images take on a therianthrope form (Fig. 1c) (Hollmann 2001; Rust 2008). In the case of swifts (Apodidae) (Hollmann 2005a), it can be argued that while the depiction of forked tails makes a species such as little swift (*Apus affinis*) a less

likely candidate, there remain several other fork-tailed candidate species. In fact, Hollmann (2005a) suggested that such images might include the swallow family (Hirundinidae).

Morris (2017) consulted ornithologists concerning engraved images of vultures in the Karoo, and it was suggested that the images depicted the Cape vulture (*Gyps coprotheres*) rather than the whitebacked vulture (*Gyps africanus*). However, this distinction was made based on the current distribution range, which is not necessarily a reliable criterion for rock art that may be thousands of years old. In our previous work, for example, having identified fossil giraffe tracks on the Cape south coast, we consulted and reported on the rock art record but noted that depiction of an image signified awareness in the mind of the artist of such a species and did not necessarily imply that the species had been identified at that particular location (Helm et al. 2018). Therefore, we view a species' current distribution range as a useful but fallible concept in identifying avian rock art images.

The interpretation of possible avian rock art images is complicated by the phenomenon of therianthropes, which form part of the global rock art record and are part animal and part human (Hollmann 2003). Figure 2 illustrates two possible avian therianthrope ('avianthrope') forms. While such images are fascinating and evocative, they limit the degree to which identification at the species level is feasible. In this context, we note a caveat: not all images that seem to represent birds or avianthropes may, in fact, depict birds. Although Hollmann (2005a, 2022) ascribed fork-tailed images (many of them therianthrope) to the swift/swallow complex, in some cases the images appear more to possess ichthyoidal attributes (Rust 2021). We thus



Figure 1. (a) Photograph of a San painting of what appears to be a diving kingfisher from the Little Karoo, 8 cm long from the tip of the bill to the tip of the tail; (b) tracing of a painting in the Cederberg of a possible forward-leaning heron surrounded by three figures; all are ~5 cm in height. Note that the 'fingers' of the human figures appear like the pedal digits of the putative heron figure, which has no bill; (c) A procession of therianthrope ostriches; the average height of the front row of figures is ~60 cm, and the tallest figures are 68 cm in height.

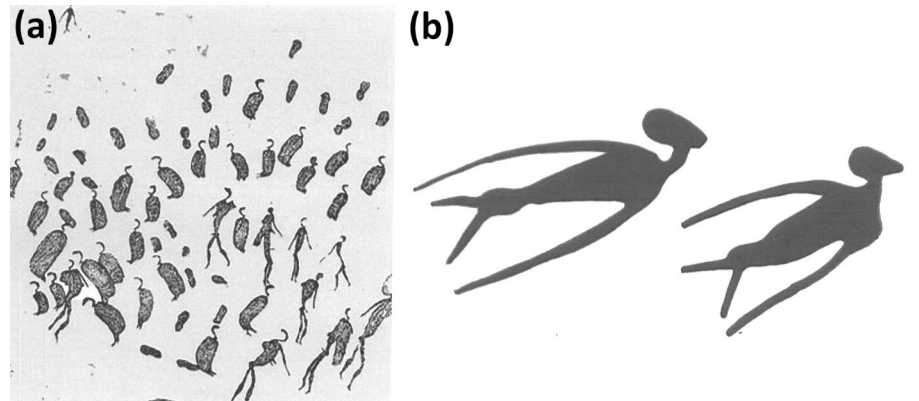


Figure 2. (a) Multiple possible avianthropes (average height of 12 cm) at a rock art site situated 30 km from the Langeberg foothills site described herein; while these may be interpreted as vulture avianthropes, they may also be interpreted as squatting kaross-clad human figures with hook heads; (b) fork-tailed swift-like therianthropes (~6.5 cm in length) with long, narrow wings and human heads, at a southern Cape rock art site.

take a broader view in which an 'either/or' dichotomy is avoided, and both possibilities are regarded as plausible.

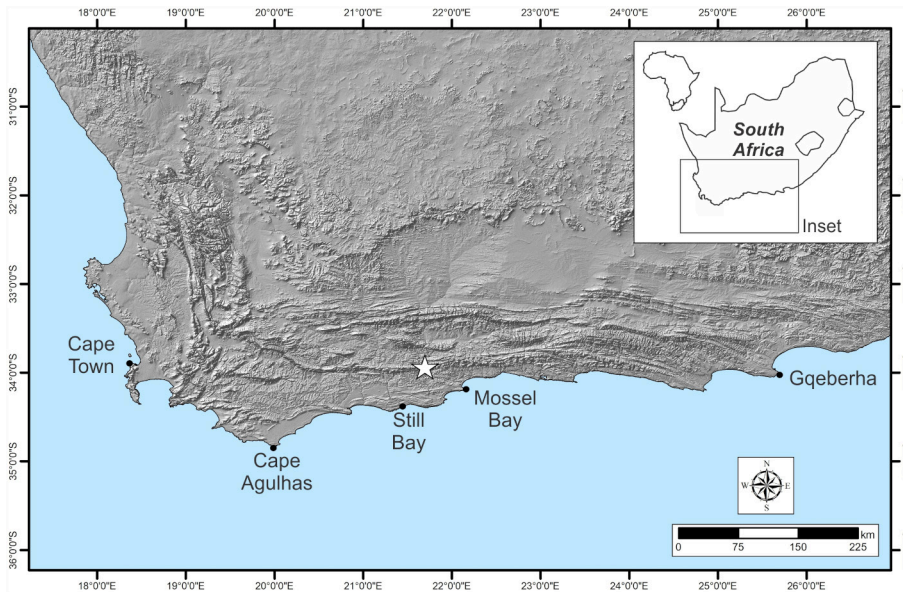


Figure 3. Map of the southwestern Cape. The star indicates the site in the Langeberg foothills described herein.



Figure 4. The rock art panel at the Langeberg foothills site. The purported rail image is at the upper right. The horizontal scale bar represents 40 cm.

We have previously attempted to bridge the disciplines of rock art and ichnology (Helm et al. 2023). We herein aim to bridge the disciplines of rock art and ornithology and consider some rock art as a form of archaeo-ornithology. The purpose of this article is to describe and discuss a rock art image that we contend represents an avianthropic African rail (*Rallus caerulescens*). This provides another exception to the rule of San rock art images only being identifiable at the family level.

The rockshelter containing this image is situated in the foothills of the Langeberg/Outeniqua mountains, east of where the Gouritz River emerges from the mountains towards the coastal plain (Fig. 3). It is located in a deep valley, approximately 30 m up from a permanent stream of water, which has dense stands of sedges and reeds. The irregular bedding of quartzites of the Table Mountain Group shapes the surface walls of the shelter, forming cavities, crevices, ledges and, in some places, smooth surfaces. The rock art is found on these smooth surfaces. The acoustics in the rock shelter include an audible echo due to the deeper extent of

the shelter and the rounded, domed shape of the inner roof. Droning sounds made in these suitably shaped hollows can be heard a substantial distance from the site.

Methods

The rock art site described here is situated on private land and was visited with the consent of the landowners, who requested that no photographs be taken and that the site locality remain confidential. These requests were adhered to, and work at the site was limited to examination, written descriptions, and tracings (for which permission was received). Tracings were made of all images, and measurements were recorded in centimetres.

Comparison was made with other rock art, and opinions on the tracings were sought from experts in their fields (e.g. ornithology, entomology). The findings were compared with the extant avian species' art, photos, behaviours and distribution ranges.

Results

The single panel with painted images is found on a smooth, exposed surface to the right of a deeper chamber, which extends inwards for a further 6 m. The panel (Fig. 4) has a maximum width of 1.6 m, with a maximum height of 1.5 m from the floor level. The frieze includes kaross-clad human figures with hook heads, some carrying equipment and sticks, others with elongated torsos and limbs. (Such 'hook heads' are a commonly encountered phenomenon—originally they may have had faces painted in white or yellow that have weathered away, and their current resemblance to bird-like creatures is thus probably coincidental.) In one case, a procession of nineteen human figures is depicted showing animated postures, in which several figures appear to be bending forward. It is not possible to determine if these figures are male or female.

Some bird-like images (not identifiable at the family level) display therianthropic features. For example, one human figure has a curved, wing-like arm, and one with a round head and arms extended appears to be flying. Other animal shapes include possible aardvark, fox and antelope. In addition, five possi-

ble plant shapes are depicted, resembling *Boophane disticha* (Fig. 5a). These images are surrounded by single finger dots, double and multiple parallel thin lines that appear to connect the images, and a round group of more than 70 tiny crosses, from which twelve similar crosses emerge in a linear pattern (Fig. 5b).

The image interpreted herein as avian measures 20 cm in maximum length and is the largest image painted at this site (Fig. 6). It is positioned on the rock face immediately below an exfoliated crevice, and it appears as if the bird is emerging from this crevice in the rock surface. It has been drawn depicting widely spaced legs and feet, with forward angulation of the tarsi that is accentuated by the slightly curved appearance of the left leg. A stubby tail is depicted pointing downwards. Four sub-parallel lines spread down and out in a slight fan pattern from the throat area, and two shorter lines extend backwards from the back of the neck. A single, short line extends downwards from the bottom of the head. Perhaps the most prominent feature is the series of at least fourteen sub-parallel lines on the flanks and belly and beside the tail. In the belly area, they are near-vertical, whereas in the flank area and towards the tail, they are more curved. The bill is absent. Both feet have long, thin, forward-pointing digits: five for the right foot and four for the left. The avian image is painted in red (probably from red ochre) except for the digits, which are painted in yellow. The fourteen sub-parallel lines are slightly darker red and hence appear more pronounced.

Discussion

Interpretation

From an ornithological perspective, the artist has captured the 'jizz' of a rail with widely spaced feet and forward-angled tarsi. The tail has been prominently depicted at the bottom end of the continuous 'flicking-cycle'. In contrast, most modern illustrations depict the African rail's tail at the top end of the 'flicking-cycle'.

The barring of the flanks and undertail coverts, one of the most distinctive features of *R. caerulescens*, has been conspicuously depicted. While the significance of the six lines emanating from the front and back of the throat (and a single line from the mouth) is uncertain, it is possible that they may represent vocalisation, which is a characteristic feature of the species. Such sound lines could also embody *n|um*, the energy force that was central to San's belief and experience (Katz 1982;

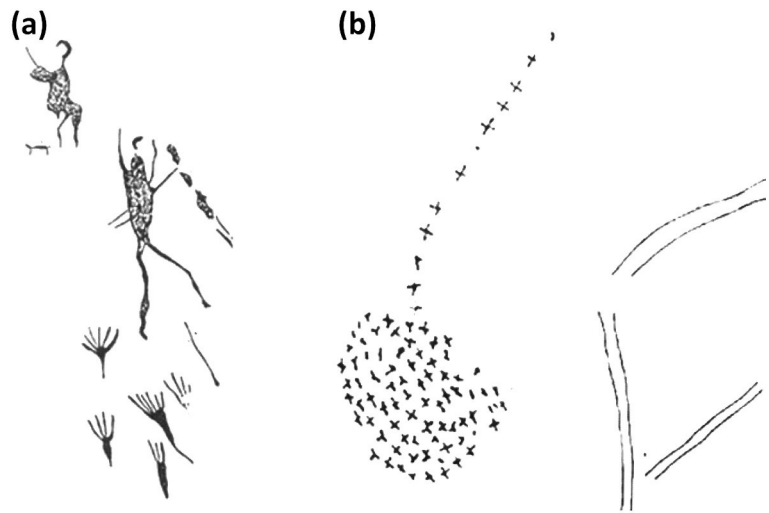


Figure 5. (a) Details of the five putative plant shapes resembling *Boophane disticha*; (b) detail of the group of more than 70 tiny crosses from which a line of similar crosses emerges.



Figure 6. Detailed image of the avian therianthrope, interpreted here as a representation of an African rail. The horizontal scale bar represents 10 cm.

Katz and Biesele 1986; Paterson 2023b).

Two features combine to make the image avi-anthrope. The first is that the long-decurved bill, characteristic of *R. caerulescens*, is absent. Instead, the head of the image resembles that of the heads of the human figures seen elsewhere in the panel. Second is that both feet have long, forward-pointing toes. The long digits are indeed characteristic of the species, but digit I should point backward, and only three digits

(II, III and IV) should point forward. Depicting four or five forward-pointing digits, therefore, imbues the image with a further human quality. We also note the similarity between the forward-pointing digits and the five images depicted in Figure 5a, for which we have noted the resemblance to the plant *Boophane disticha*. An alternative interpretation of those five images is that they represent avian tracks, albeit with an incorrect number of digits.

We considered that the bill might initially have been painted but flaked off over time and thus no longer be detectable and that the forward-pointing toes represent an error. However, we considered both these possibilities to be unlikely, and credit was given to the artist for firstly capturing the essence of the African rail and secondly imparting therianthropic characteristics to the image.

Other members of Rallidae that currently occur in or near the Western Cape include black crane (*Amaurornis flavirostris*), Baillon's crane (*Porzana pusilla*), redchested flufftail (*Sarothrura rufa*), buffspotted flufftail (*Sarothrura elegans*), striped flufftail (*Sarothrura affinis*), purple gallinule (*Porphyria porphyria*), moorhen (*Gallinula chloropus*), and redknobbed coot (*Fulica cristata*) (Harrison et al. 1997). Within this group, the only species that exhibit barring of the flanks are the juvenile Baillon's crane, the female striped flufftail, and the female buffstreaked flufftail. In the former two cases, the barring is faint, and in the latter, it extends up well onto the breast. All three species are seldom seen compared to *R. caerulescens*. The African crane (*Crecoptis egregia*) exhibits the most heavily barred belly and flanks of any member of the southern African Rallidae, but within southern Africa, it has an eastern and northern distribution.

Based on these interpretations, we are comfortable interpreting the image as an African rail, with therianthropic features involving the head and feet. The absence of other suitable regional candidate species strengthens this inference.

The round group of red crosses (numbering 70 plus) resembles a swarm of bees or termites (cf. Lewis-Williams and Dowson 1989: 64–65 and 98–99). The twelve or more insect figures' flying' out upwards could represent bees flying out of a hive or to a new hive (making a 'bee-line') or swarming insects such as termites, which move in long columns by night (Mguni 2015; Tribe 2017). Aardvark feeds exclusively on termites and ants (Van den Heever et al. 2017), and the proximity of a possible aardvark image suggests the possibility that the red crosses represent termites.

Heinz (1978: 152) described the astute observations of the San concerning bees in a quote relevant to this portion of the panel: 'When they swarm, they hang in a tree, while some bees go off in search of a new nesting place. They then return to inform the others and all bees fly to the potential nesting site. A few bees precede the rest to see if the nesting place is safe.' Bees and honey have strong *n|um* (Marshall 1999: xxxiii, 216;

Keeney and Keeney 2015: 215), and the name of the Sky God's wife, |Aqn-|aqnce, means 'mother of the bees' (Keeney and Keeney 2015: 209). Marshall (1999: 6) expressed this by stating that the elder wife, Khwova Nla, of the Creator God was called 'the mother of the bees' and that when men went to look for honey, they prayed to her. In 1981, it was claimed that 'in the Kalahari today, Bushmen still like to dance when the bees are swarming because they believe that they can harness their potency for a particularly effective dance' (Lewis-Williams and Dowson 1981: 64). Spring is the time of year in which bees swarm, and rails breed in the southwestern Cape, and it is therefore possible that the panel depicts the spring season.

The five plant-like images resemble the bulbous plant *Boophone disticha*. Their 'leaves' point upwards, and the artist has painted the bulbs as well. This plant possesses powerful psychoactive properties and was used in San male initiation ceremonies (Paterson 2023a). As noted above, the resemblance to avian tracks is also acknowledged.

The sets of thin red parallel lines may be interpreted as 'ropes' connecting the San to everything in their ecosystem: birds, flying insects (bees or termites), animals and plants (Paterson 2023b). The animated group procession, with some figures bending forward, may represent a male initiation ceremony in which specific knowledge is passed on from adults to initiates (cf. Parkington and Paterson 2021). The rail, its aquatic environment and its unique vocalisations could conceivably be part of such knowledge transfer. An alternative explanation is that the line of dancing figures could represent women dancing at a female initiation ceremony. Biesele (1993: 138) reported that in the Creation Story for women in San mythology, women originate in water, and their fecundity is connected with seclusion in a watery place.

The site's acoustic potential may have been utilized to intensify sound, whether from low sounds of singing and clapping, as at a ritual dance, or the sound of swarming bees, which is reminiscent of the enhanced sound 'heard' by ritualists in trance experiences.

Although San rock art can be difficult to date with accuracy, an estimate of at least 2000 years for regional rock art has been provided by Deacon and Deacon (1999). In parts of southern Africa, including in the region of the purported rail painting, rock art was still being created until the end of the 19th century. Southern African rock art may also be as old as 27,000 years BP (Lewis-Williams and Challis 2011). For these reasons we are cautious concerning the age of the panel described here.

The red pigment used by San rock artists was principally ochre, heated over a fire and ground between two stones to a fine powder and mixed with blood. Amino acids have been detected in some such rock art pigments, probably derived from blood, and the use of antelope blood in the manufacture of paint was recorded by some early writers (Lewis-Williams and

Dowson 1989: 18–19).

The African rail: a synopsis

Rallus caerulescens is a distinctive medium-sized rail (~27 cm in length) with a rather long, slightly decurved, slim red bill. The legs and eyes are also red. The front of the neck and the breast are blueish. Black-and-white barring on the flanks and undertail coverts is prominent. It is the only southern African rail with a chestnut-coloured plain back. The body is laterally flattened. Three long, forward-pointing toes are present (digits II, III, IV) and a single backward-pointing toe (hallux, or digit I). The short tail is continually flicked (Newman 2002).

It is a noisy bird with a trilled whistled *treee-tee-tee-tee-tee* call. While it is secretive and under-recorded, the loud, distinctive call makes its presence known in the preferred habitat of dense wetland vegetation, such as thick reedbeds (Harrison et al. 1997). Nonetheless, it may emerge from cover into the open, especially in the early morning, and can, therefore, be seen less infrequently than many other rail and crane species (Sinclair et al. 2002; Roberts 2005). It moves with stealth and speed (Newman 2002). It stands upright when alarmed, flattens its feathers and raises its tail or freezes, dropping onto its tarsi (Roberts 2005).

In common with many other rail species, the legs appear fairly widely spaced, the tarsus is angled forward, and the digits are long and narrow (an adaptation that facilitates treading on waterlilies and other aquatic plants). The lateral flattening and the ability to flatten the plumage aid in navigating narrow passageways between reeds in dense reedbeds.

The African rail is endemic to sub-Saharan Africa. One of the highest reporting rates in southern Africa was from the Western Cape Province (Harrison et al. 1997). Hockey et al. (1989) noted that it was more widespread in the southwestern Cape than previously thought.

The type specimen of the African rail and nomenclature

The holotype of *R. caerulescens* is a watercolour painting by Georg Foster, an artist who was on board the second expedition of Captain James Cook (Fig. 7). The work was painted at the Cape of Good Hope in 1773 and is held by the Natural History Museum in London (Lysaght 1959: 302).

Soon afterwards, it was formally described (Latham 1785: 234). Until now, this was the oldest known depiction of the African rail. It has also been



Figure 7. The holotype of *Rallus caerulescens*, a watercolour painting by Georg Foster, was painted at the Cape of Good Hope in 1773 and is held by the Natural History Museum in London. The image is in the public domain and downloaded from Wikipedia.

known as the Cape rail (e.g. Roberts 1940) and the water rail (e.g. Roberts 1971).

Why choose to depict an image of an African rail?

Several factors potentially make the African rail suitable for depiction by a San artist. First is that of proximity and local occurrence. The current prevalence of *R. caerulescens* in the southwestern Cape, and the close proximity of the rock art site to a wetland (which currently contains reedbeds) make it possible that the species would have been audible and visible to the local San inhabitants.

Its characteristic vocalisations would have been commonly heard, especially during the breeding season. According to Liebenberg (1990: 83), for the San each species of animal or bird is perceived to have its own characteristic behaviour, which is governed by its *kxodzi* (customs) and its particular *kxwisa* (speech or language).

Furthermore, its distinctive colouration, barring on the flanks and long toes, would have rendered it recognisable and unique in the region. A bird that was often heard yet seldom seen might have provided an eerie, 'ghostly' flavour. Being less secretive than many other rails, it would have been readily observable by a patient, astute ornithologist such as a San artist.

The red colour of the African rail's eyes, legs and bill may have had special meaning to the San, for whom red was a colour with powerful *n|um* due to its links to blood, the hunter's First Kill rite, the menarche initiation rite, the male Tshoma initiation rite, and the dominant red ochre colour in their rock art (Marshall 1999: 188, 205–207). In this context, Marshall (1999: 109) reported that 'the redwing partridge bird has n/um. The partridge's redness may link it with blood'. (As Marshall was relating this to information gleaned

from the Nyae Nyae !Kung in the northwestern Kalahari, the most likely species would be the Orange River francolin, *Scelopoptila levaillantoides*, rather than the redwinged francolin, *Scelopoptila levaillantii*).

In addition, we can postulate that its lateral compression and ability to flatten its feathers to facilitate rapid and easy disappearance between reeds into a reedbed might be a further factor. The expression 'as thin as a rail' probably refers to the fact that some rails are almost two-dimensional, their bodies being laterally compressed (Sibley 2001). Furthermore, the feathers can be held tightly to the body when required. These adaptations allow it to easily slip through narrow spaces, such as between reeds (Sibley 2001: 247).

In the same way that Hollmann (2005a) linked images of 'swift-people' to rock cracks and crevices and suggested that they formed a conduit to the spirit world of the San behind the rock face, we can speculate on a possible similar intention through an avianthrope of a 'rail-person': might there be a similar spirit world deep in the reedbed, and might such a therianthrope be portrayed as a conduit to that world? Accounts of waterholes as entrances to the spirit world have previously been reported (Biesele 1979; Lewis-Williams and Dowson 1990).

Although not identifiable at the species level, the putative heron image in Figure 1b bears similarities to the possible 'rail-person'. In both cases, the bill is absent, and the feet/hands clearly depict avianthrope qualities. Furthermore, like the African rail, many heron species inhabit wetlands. Just as we postulate the depiction of a 'rail-person' in Figure 6, we postulate a 'heron-person' or 'heron-people' in Figure 1b.

Alternatively, we can postulate that the avianthrope rail image is female and that the line of dancing figures may represent women dancing at a female initiation ceremony, celebrating women emerging from a watery place. In creation myths in other southern African groups, ancestral humans sprang forth from reeds (Callaway 1868), and in San mythology/Kaggen, the trickster-deity created the eland in a waterhole (Bleek 1924: 2; Lewis-Williams and Challis 2011).

In this context, bulrushes (*Typha capensis*) have many traditional uses. The rhizomes are used in traditional medicine to enhance fertility and ensure easy parturition. A porridge prepared from an infusion using the rhizome has been used to treat menstrual or uterine pain, strengthen contractions during labour, and aid in expelling the placenta in humans and animals (Van Wyk and Gericke 2000). This suggests that reeds have favourable female connotations.

In combination, such considerations could have made the African rail a suitable choice for a San artist. Seen in this context, the therianthrope features of five forward-pointing toes and a human head become inspired additions.

Conclusions

We acknowledge that the constraints imposed by

the landowners and the consequent absence of photographs result in a sub-optimal situation in which our findings need to be taken 'on trust'. We contend, however, that the unusual nature of the art and our resulting interpretation justify our bringing it into the public domain.

Although it is presumptuous to claim to fully understand the meaning and intention of a work of art, informed speculation is possible. Avian and flying themes permeate the panel, with an inferred relationship between birds and humans, who may participate in a male initiation ceremony. The whole is suffused with *n!um* energy and with connections between the various images that are depicted. By virtue of its size, the main purported avian image dominates the frieze, with its placement hinting that it is emerging from a crevice in the rock wall.

We interpret this image as a therianthrope of an African rail (*R. caerulescens*). If we choose to extend the metaphor of Hollmann (2005a), who coined the term 'swift-people', it is a 'rail-person', or, more precisely, an 'African rail-person'. Furthermore, it may be the oldest known depiction of this species, created by a talented artist and probably predating Foster's holotype considerably. We contend that it forms a welcome exception to the notion of San avian art only being identifiable at the family level.

The depiction of an African rail avianthrope may conceivably have deeper significance, such as functioning as a conduit to the San spirit world, which may exist in the reedbed as well as behind the rock face. Alternatively, it may be related to male or female initiation ceremonies or be part of a Creation myth, with its red colouration adding an extra dimension. The combination of bees, flowers and birds in a San painting suggests themes of springtime or fertility. Recognition of the San as accomplished ornithologists in southern Africa can provide important historical context to modern ornithology in the subcontinent and understanding of southern African rock art.

Data availability

Locality data is deposited with the African Centre for Palaeoscience at Nelson Mandela University, Gqeberha, South Africa, to be made available to *bona fide* researchers upon request to the corresponding author.

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