Rock Art Research **2024** - *Volume 41, Number 1, pp. 28-40. N. COLE et al.*

KEYWORDS: ***Catfish – Jewfish – Eel – Laura/Quinkan – Motif – Classification***

CATEGORISING CATFISH, JEWFISH AND EEL MOTIFS IN LAURA (QUINKAN) ROCK ART, CAPE YORK PENINSULA, AUSTRALIA

Noelene Cole, Christine Musgrave, Roseanne George, Lynley Wallis, and the Laura Indigenous Land and Sea Rangers

Abstract. Fish motifs in Aboriginal rock art of the Laura area (Cape York Peninsula, Queensland, Australia) include a heterogenous group that has been imprecisely classified by rock art researchers. By analysing motif attributes, style and contexts (including natural populations), we characterised three categories: fork-tailed catfish (*Neoarius paucus*), eel-tailed catfish (*Neosilurus* spp.) and eel (*Anguilla reinhardti*). We label the categories with the local names 'catfish', 'jewfish' and 'eel'. The catfish cohort has a relatively naturalistic style, while the eel exhibits anatomical trends of eels, distinctive arrangements, and stylistic overlaps with jewfish that may denote shared meanings. Ambiguity is confirmed as a cultural value and communication mode of the rock art system.

Introduction

Aboriginal land use in the Laura area of the Quinkan rock art region of Cape York Peninsula, Queensland, Australia, was tied to the rainfall regime of the wet-dry tropics and hydrology of the Normanby River system. The significance of water is reflected in the location and style of rock art: most rock art sites lie within one kilometre of permanent or semi-permanent water and contain images of aquatic animals (fish, crocodiles, rays, turtles and crustaceans). The fish category includes a heterogeneous group of motifs that have been inconsistently or imprecisely labelled by rock art researchers beginning with Trezise (1971, 1993), who, as discussed below, used the labels 'catfish' and 'eels' interchangeably. Others (see Rosenfeld 1982; David 1994; Cole 1995) have variously noted eel, catfish, or eel/catfish without clarifying the labels.

The problem of distinguishing between such motifs is not confined to the Quinkan region (also known as the Laura region). At Bare Hill, north Queensland, and Woronora, near Sydney, Clegg (1971: 39; see also Sefton 2013: Fig. 8) recorded and defined 'eels' as 'long ovals with "ears" at one end, considered the head', but later described these motifs as 'Eel/Catfish … [having] elongated oval with ears and/or antennae' (Clegg 1977: 263). In another Sydney Basin study, Dibden (2019) classed such motifs as 'eels'. In western Arnhem Land, Northern Territory, Lewis (2015) argued that certain fish motifs represent *Anguilla bicolour*, Indonesian short-finned eel, rather than eel-tailed catfish as previously identified (cf. Chaloupka 1993).

As noted by Morphy (1989: 5), questions of motif identification may (theoretically) be easier to solve if asked 'of the artists and the intended audience'. In western Arnhem Land, Taçon (1988) combined cultural information with formal analysis to identify different fish motifs, including eel-tailed catfish (*Neosilurus* sp.) and fork-tailed or lesser salmon catfish (*Hexanematichthys leptaspis*), although elsewhere he noted that such depictions are complex, being imbued with 'multiple meanings' and 'associations' (Taçon 1989: 237). Two studies of selected animal motifs in Quinkan rock art reflect such complexities. Trezise (1977) analysed 35 crocodile motifs from 20 sites and concluded that such motifs have a standardised outline with little further anatomical detail; one quarter 'are likely to be intended as representations of the freshwater crocodile', while none 'unambiguously' represent saltwater crocodile (Trezise 1977: 333). Trezise (1977) inferred links with mythology and oral traditions by including a Gugu Yalanji story of Narwool, the freshwater crocodile. Rosenfeld (1982) aimed to identify species in 201 furred animal motifs, anticipating that: 'If the visual clues for the specific identification … are encoded within the figures it should be possible … to rediscover them from a detailed style and trait analysis' (Rosenfeld 1982: 204). Ultimately Rosenfeld (1982) detected anatomical trends rather than diagnostic features. Using a cultural analogy, she identified 'minimal or ambiguous visual content' as a significant

feature requiring reference to external cultural information for its interpretation (Rosenfeld 1982: 217).

These Australian studies are reference points for this new research, particularly because, like fish, crocodile and furred animal motifs, the collective 'catfish/eel' group is large, widely distributed and heterogeneous. Here we aim to clarify the so-called eel and catfish categories, i.e. characterise types more precisely, by analysing the artistic conventions that delineate and/or relate them and the contexts in which they occur. In view of issues raised in the Laura studies (and see Bednarik 2013), we are mindful that achieving taxonomic certainty across the board is unlikely. Like other motif-specific research in the general area (Rosenfeld 1982; Flood 1987; Cole 2010), the study has the potential to shed light on rock art's operational modes. In effect, we are dealing with ontological questions about rock art practice, e.g. *how* the artists constructed, embodied and revealed meaning in these motifs (cf. Jones and Díaz-Guardamino 2018).

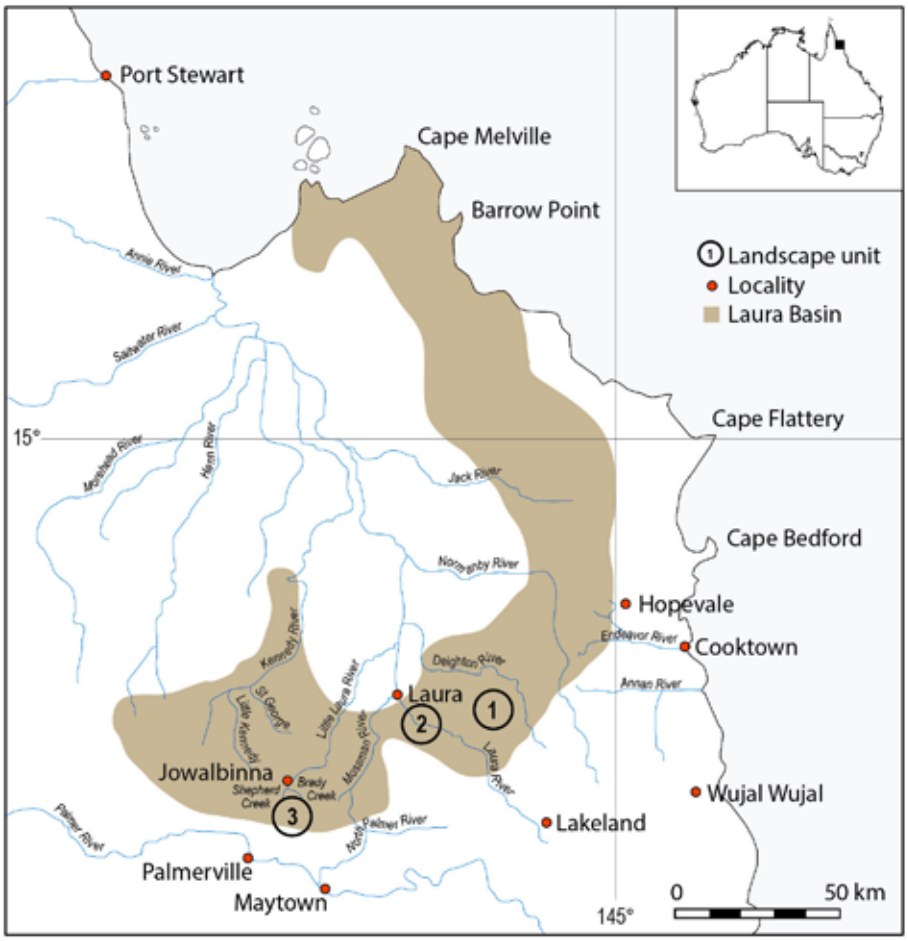

Figure 1. *Map of the study area indicating localities 1–3.*

Methodology

The study area comprises catchments and streams of the Laura River system in National Heritage Listed 'Quinkan Country' (Fig. 1). As part of the Normanby River system, the Laura River drains the southern part of the Laura Sandstone Basin. The land consists of clan estates whose owners spoke related languages and interacted widely in customary ways (Rigsby 2003; Cole 2016, 2022). For locational analysis, we divided the study area into landscape units (see Fig. 1):

1. Uplands drained by eastern tributaries of the Laura River;
2. Laura River valley and fringing escarpments; and,
3. Uplands drained by western tributaries of the Laura River.

The dataset (301 motifs distributed across 109 sites) comprises motifs that follow Clegg's (1971: 39) definition: 'long ovals with "ears" at one end, considered the head' and variants that have fork tails, barbels (whisker-like protrusions from the head) and/or extra fins (Trezise 1969: 75). All are drawn as if viewed from above, a convention used in Quinkan rock art to portray 'low' or 'flat' animals such as echidna, turtle, reptiles and certain fish (see Trezise 1977: 332; Rosenfeld 1982: 200).

We identified natural fish populations of the study area prior to analysing the dataset. Rock art data was sourced from field records of the authors and Percy Trezise. Motifs were initially analysed with reference to morphology (tail shape and presence/absence of barbels) and features of natural populations. The types were then examined with attention to details such as head and snout, number of dorsal fins, the relative position of fins, and presence or absence of fin spines (see Allen et al. 2002: 41). As noted by Rosenfeld (1982), aspects of the body shape of faunal motifs can be expressed by simple ratios of linear dimensions. Hence, following Rosenfeld (1982), we defined curvature as the total length over maximum height of the upper outline above this line (Fig. 2).

The stylistic analysis included comparing colour use in outlines, base colour and internal design features. Dots were of particular interest as blotching is a diagnostic feature of *Anguilla reinhardti* (marbled

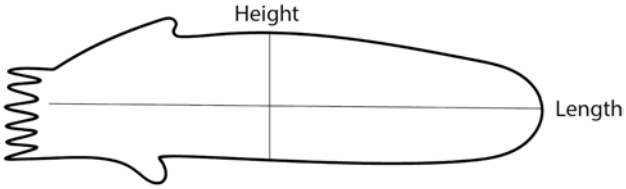

Figure 2. *Measuring body curvature of motifs.*

Family	Genus	Species	Common names	Distribution in Normanby River
Ariidae	Arius	*Neoarius paucus*	Catfish; fork-tailed catfish; eastern shovel-nosed catfish	Common and widespread; unlikely to occur in headwaters
Plotosidae	Neosilurus	*N. ater*	Jewfish; eel-tailed catfish; black catfish; narrow-fronted tandan	Widespread; adults migrate upstream in pairs
		N. hyrtli	Jewfish; Hyrtl's tandan	Widespread in perennial and ephemeral streams and floodplain wetlands
Anguillidae	Anguilla	*A. reinhardti*	Eel; marbled eel; longfinned eel; speckled longfinned eel	Widespread but not in high densities; can exist throughout, including in headwaters, and reach a large size in small waters; can slither up wet banks and travel short distances during upstream migrations

Table 1. *Fork-tailed catfish, eel-tailed catfish and eels of the study area (see Midgley 1990; Allen et al. 2002; Pusey et al. (2017).*

eel, see Table 1). As meaning and structure in Aboriginal rock art are embedded not only in the motifs themselves but in their sociocultural and natural environments and relational features (Morphy 1991: 7; Morwood 2002: 178), we considered areal distributions and frequencies as well as intra-site relationships such as motif correlations, compositions and positions. The latter include superimpositions, another relational feature that can inform on cognitive constructs of rock art practice (see Cole and Watchman 1996; Gunn et al. 2022). In this case, we identified motifs superimposed by (i.e. underlie) the study group. To explore 'locale' or general site contents as a source of contextual data relating to species recognition (see Rosenfeld 1982), we compared assemblages of two site types. Based on previous research (Rosenfeld 1982; Cole 1988; and see Cole 2016: 66), these are identified as (1) sites containing c. 20 or fewer motifs, i.e. less than half of the mean number of 44 motifs per site (see Table 11), and (2), sites that contain more than the mean number of 44 paintings per site; the latter include major sites such as Giant Horse C3, Sandy Creek 1 and Crocodile 1.

Species	East Normanby River (1988)	Laura River (1971)	Brady Creek (1990)
Neoarius midgleyi (now attributed to *N. paucus*, see Pusey et al. 2017)	✓		
Neosilurus spp. (includes both 'mottled' and 'yellow fin')	✓	✓	✓
Anguilla reinhardti	✓	✓	✓
Total fish species recorded	16	13	7

Table 2. *Fork-tailed catfish, eel-tailed catfish and eels recorded (✓) in the Normanby River system from 1971–1990 by Midgley (1990).*

In the process of clarifying the labels, we revisited Trezise's reports of his cross-cultural research (see Cole 2011 for an evaluation of the cogency of cultural and linguistic information contained therein). While archaeology is at the core of analysis, the knowledge of contemporary Laura people and their Old People (their ancestors), as well as cultural analogy, are essential to this study. Rather than overtly prioritising 'formal' or 'informed' methods (cf. Taçon and Chippindale 1998), we aim to employ them jointly (see Jones and Díaz-Guardamino 2018). We apply names used by local Traditional Owners for the motif types identified.

Fork-tailed catfish, eel-tailed catfish and eels of the study area

The Normanby drainage basin covers approximately 24385 km^2 of estuarine, lacustrine, palustrine and riverine environments (DES 2022). Due to this environmental diversity, the distribution of fish species varies. For example, *N. graeffei* (lesser salmon catfish) and *Porochilus rendahli* (Rendahl's catfish) generally inhabit eastern waters (including lowland wetlands) of the Normanby Basin rather than streams of the study area and are omitted here.

Tables 1 and 2 list catfish and eel species distributed in the study area; Table 3 summarises their general features (see also Fig. 3). *Anguilla reinhardtii* occurs widely, albeit not in large numbers, including in streams 'well away from the shore' (Allen et al. 2002: 63; Pusey et al. 2004: 79; 2017; Table 2). *Neoarius paucus* (fork tail catfish) is common (see Pusey et al. 2004: 106, 2017: 25), but unlikely to be present in headwater streams (Midgley 1990). Eel-tailed catfishes (*Neosilurus ater* and *N. hyrtlii*) are widely distributed but unlikely to reach a large size in headwater streams (Midgley 1990).

Features	*Neoarius paucus*	*Neosilurus* spp.	*Anguilla reinhardtii*
Caudal fin (tail)	Fork tail	Tapered; confluent with dorsal and anal fins	Tapered; dorsal, caudal and anal fins are continuous
Body	Stout	Tapered	Elongate, tubular
Head	Rectangular, squarish (shovel-nosed) or truncate	Broad, slightly flattened; elongate in *N. ater*	Broad, rounded, large mouth.
Barbels	Short; three pairs	Four pairs	Absent
Fins	Multiple (adipose, dorsal, anal, paired pectoral)	Multiple (dorsal, paired pectoral and pelvic fins; anal fin); dorsal and anal confluent with caudal fin	Two small pectoral fins, dorsal and anal fins confluent with caudal fin.
Spines	Venomous spines at dorsal and pectoral fin origins	Venomous spines at dorsal and pectoral fin origins	Absent
Length (cm)	Commonly to 50 cm; maximum c. 140 cm	Commonly to 20–25 cm; *N. ater* 25–47cm; *N. hyrtlii* 20–34 cm	Commonly to 100 cm; maximum 150 cm
Colour	Reddish brown to dark bluish brown above; whitish below	Varies according to species and time of year: e.g. grey; dark brown; pale yellowish brown, blackish; *N. hyrtli* is golden-orange during breeding	Distinctive dark blotching, olive/brownish background; elvers transparent

Table 3. *Features of fork-tailed catfish, eel-tailed catfish and eels of the study area (Midgley 1990; Herbert and Peters 1995; Allen et al. 2002; Pusey et al. 2004, 2017).*

Type	Number of measured motifs	Length (cm)	Width (cm)	Curvature ratio
Catfish	26	57	29	5
Jewfish	38	60	19	7
Eel	162	71	12	12

Table 4. *Body size and shape (mean dimensions and curvature) of the motifs (curvature ratio = total length over maximum height of upper outline above this line, see Fig. 2).*

Catfish, jewfish and eel motifs

With reference to features of natural populations (see above) and motif morphology, we divided the dataset into three types: fork-tailed catfish, eel-tailed catfish and eel. Fork-tailed catfish motifs, henceforth labelled 'catfish', are distinguished by forked tails and truncated heads; barbels protruding from the head are generally depicted. Length follows the common length of *N. paucus*, and width reflects the characteristically stout bodies of the species (see Tables 3 and 4 and Figs 3 and 4). The multiple fins of *N. paucus* (see Table 3) are sometimes depicted, and the pungent spine is not apparent.

Eel-tailed catfish motifs, henceforth labelled 'jewfish', have eel-like (rounded or slightly tapered) tails and heads with protruding barbels

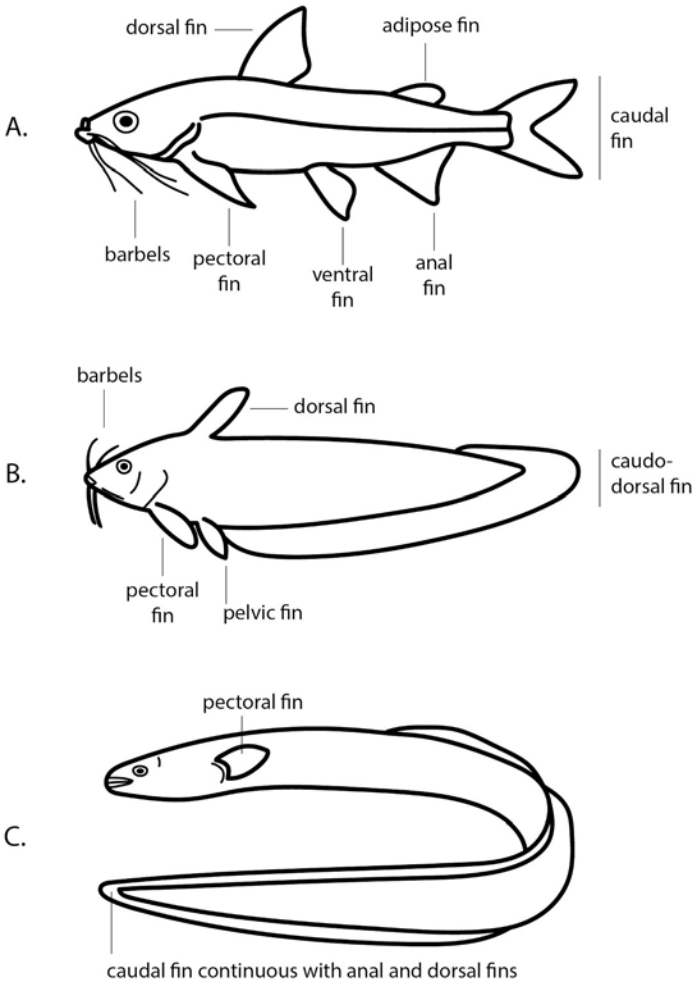

Figure 3. *Ariidae, Plotisidae and Anguillidae (after Allen et al. 2002: 40–41).*

Figure 4. *Juxtaposed catfish and bony bream motifs at Brady Creek, locality 3.*

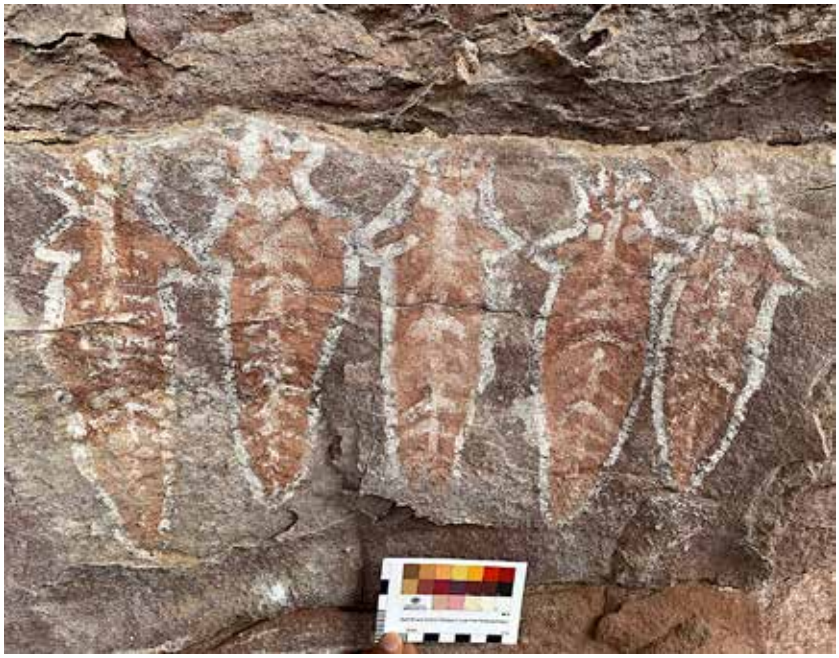

Figure 5. *Cluster of jewfish motifs at Collapsed Gallery, locality 1.*

Figure 6. *Eel motif with internal markings at Collapsed Gallery, locality 1.*

(see Figs 5 and 10 and Table 3). The mean length exceeds the maximum length of *Neosilurus* spp. (Table 3) and body width tends to be narrower than that of catfish motifs (Table 4). The multiple fins of *Neosilurus* spp. seldom occur, and the poisonous spine (see Table 3) is not depicted, at least explicitly. For example, Trezise (1971: 30) noted 'a sorcery type catfish superimposed over a man's legs, with a lateral spike against one leg' at Pig Gallery. However, the illustration (Trezise 1971: Pl. 4) suggests a pectoral fin rather than a spike.

Eel motifs are simply styled with rounded or tapered tails and bodies that tend to be elongated and relatively straight (see Fig. 6 and Table 4). However, a few motifs are distinctive in having their lower bodies set at an angle (see Fig. 7), a feature that, as it is unique to eel motifs, may reference the rolling motion of eels. The trait recalls the angled tails of goanna motifs that signify 'mythological and topographic referents' in Yolngu art (Morphy 1991: 154). The heads of eels are usually rounded (Table 3; for examples, see Trezise 1971: Pl. 22, Ginger Creek Site B1/10 and Pl. 23, Red Bluff Site A3/53). Several variants with narrow, elongated heads are tentatively included in the category (and see below). The mean length of eel motifs exceeds that of catfish and jewfish motifs but is less than the common length of *A. reinhardtii* (see Table 3).

Motif frequencies and distribution

Catfish motifs are somewhat rare, jewfish common, and eels ubiquitous (see Table 5). All types have high-frequency rates in western tributary areas (locality 3, see Table 6), a spatial pattern that is unlikely to reflect the natural decline in fish species 'from lower, to middle, to upper reaches' of streams (Midgley 1990; see Table 2). As noted, headwaters are unlikely habitats for *N. paucus*, and *Neosilurus* spp. do not grow to a large size in such streams. Eels, however, can thrive 'in deep water … well away from the shore' (Allen et al. 2002: 63), such as perennial waterholes of Brady Creek (see Table 2). Jewfish and eel motifs have remarkably

Motif	No. recorded	No. of sites
Catfish	28	17
Jewfish	49	31
Eel	224	100

Table 5. *Frequencies of catfish, jewfish and eel motifs.*

Locality	Catfish		Jewfish		Eel	
	n	%	n	%	n	%
1	3	11	15	31	78	35
2	9	32	13	26	40	18
3	16	57	21	43	106	47

Table 6. *Local distribution of motif types (numbers and percentages).*

Figure 7. *Eel motif with bent tail, Sandy Creek area, locality 3.*

similar distribution patterns, if not frequencies, across the study area. All categories are distributed in a range of site types, including in major sites (see above) and in relatively small rock art sites that contain far fewer than the mean number of 44 paintings per site (see also Table 11).

Painting style

Following the Laura style, the study group are painted in tonal variations of red and/or white, less frequently in yellow, or yellow with white or red, and occasionally in other colours (see Table 7). Jewfish and eel have very similar patterns of colour and form, including a slight majority of monochrome paintings. Catfish motifs have a singular style of colour and form and tend to be bichrome (see Table 7).

Occurrence	Catfish sites		Jewfish sites		Eel sites	
	n	%	n	%	n	%
1	11	65	19	66	48	48
2	3	18	9	29	21	21
Multiple	3	18	3	9	31	31

Table 8. *Occurrence per site in ones, twos, and multiples (three or more).*

All types include many paintings (c. 38–48%) with internal lines that bisect the body lengthwise and/or segment it vertically at the pectoral fins (e.g. see Figs 5 and 6). All include examples with x-ray-style vertebrae and/or an internal organ such as an oval-shaped kidney (Table 7). Although a few eel motifs have particularly elaborate all-over dotted infill, dots also feature on catfish and jewfish motifs (Table 7). Internal designs do not explicitly differentiate the types.

Intra-site arrangements, compositions and superimpositions

It is common for each type to occur as a single example in a site (Table 8). Although the eel is the most likely to occur in multiples, clusters of jewfish motifs have been recorded in locality 1, including a group of five at Collapsed Shelter (Fig. 5). As each motif is less than 20 cm in length, the species depicted may be *N. hyrtlii* known for its small size and schooling behaviour (Pusey et al. 2004).

Paintings of eel occur frequently in sites without catfish or jewfish (see Table 9). When more than one type is painted in a site, the usual combination consists of eel with *either* catfish *or* jewfish. It may be cognitively significant that catfish and jewfish rarely occur

Colour/form	Catfish (n=28)	Catfish (%)	Jewfish (n=45)	Jewfish (%)	Eel (n=217)	Eel (%)
Red	5	18	20	44	72	33
Red outline only	2	7	5	11	30	14
Red with white outline	13	46	13	29	63	29
White	1	4	0	0	10	5
White with red outline	6	21	4	9	27	12
Other	1	4	3	7	15	7
Bichrome	20	71	20	41	100	46
Monochrome	8	29	25	59	117	54
Infill of dots	1	4	4	9	15	7
Infill of lines	13	46	17	38	83	38
X-ray type infill	1	4	2	5	6	2

Table 7. *Colour and form of catfish, jewfish and eel motifs; other = yellow, pink, orange (note that colour was analysed in 28/28 catfish, 45/49 jewfish and 217/224 eel motifs).*

Type/s	Number of sites
Only catfish	1
Only jewfish	7
Only eel	67
Catfish and jewfish	1
Catfish and eel	10
Jewfish and eel	18
Catfish, jewfish, and eel	5

Table 9. *Co-occurrence of fish types within sites.*

in the same site unless eel is present.

Intra-site positioning of all types follows the standard pattern of Laura rock art — most paintings are placed on rockshelter walls, while a minority are on ceilings or in small adjoining alcoves. However, a notable pattern perhaps relating to image recognition is the regular placement of the eel motif along lower walls, particularly in major rock art sites such as Sandy Creek 11 and Giant Wallaroo (see Fig. 8).

Juxtaposed motifs with known associations or the same stylistic attributes are assumed to be a composition or scene (e.g. see May and Domingo Sanz 2010). Although a detailed analysis of juxtapositions was beyond the scope of this paper, field observations indicate that jewfish and eel are each regularly composed with snake motifs (e.g. see Figs 9 and 10, and see Trezise 1969: Pl. 16), an arrangement that may link directly with Story (see below). Some compositions may relate to sorcery practice as Aboriginal consultants stated that 'Some paintings of snakes, eels and catfish' are of 'a sorcery nature' (Trezise 1971: 9). The associations evidently relate to the dangers of catfish spikes and snake venom, and perhaps to the snake-like bodies and deep-water habitats of eels.

All types are involved in compositions that suggest ecological and/or hunting associations, for example, a catfish painted alongside a bony bream, a major food source (see Fig. 4); a jewfish painted at the beak of a large predator bird (possibly a jabiru); eel and catfish motifs impaled by a spear or woomera (see Figs 11a and 11e). Trezise interpreted an eel motif jux-

Associated motifs	Catfish type 1	Catfish type 2	Jewfish type 1	Jewfish type 2	Eel type 1	Eel type 2
Animal (species unidentified)	✓		✓	✓	✓	✓
Anthropomorph	✓	✓	✓	✓	✓	✓
Bark cylinder	✓		✓		✓	✓
Barramundi	✓				✓	✓
Beehive	✓	✓			✓	✓
Bird	✓	✓	✓	✓	✓	✓
Bird track	✓		✓		✓	✓
Boomerang	✓		✓		✓	✓
Crocodile	✓		✓		✓	✓
Dillybag	✓		✓	✓	✓	✓
Dingo	✓		✓	✓	✓	✓
Echidna	✓		✓	✓	✓	✓
Emu	✓		✓	✓	✓	✓
Fish	✓		✓	✓	✓	✓
Flying fox	✓	✓	✓	✓	✓	
Horse	✓				✓	✓
Lizard/goanna	✓		✓		✓	
Long tom		✓	✓	✓	✓	✓
Macropod	✓	✓	✓	✓	✓	✓
Macropod track	✓		✓	✓	✓	✓
Pig	✓		✓		✓	✓
Plant	✓		✓		✓	
Possum	✓				✓	
Quinkan spirit	✓		✓	✓	✓	✓
Saw shark	✓		✓		✓	✓
Scrub turkey	✓		✓		✓	
Snake	✓		✓	✓	✓	✓
Sting ray	✓		✓		✓	
Stone axe	✓		✓	✓	✓	✓
Turtle	✓		✓	✓	✓	✓
Track (human)	✓		✓	✓	✓	✓
Woomera	✓		✓		✓	
Yam	✓	✓	✓	✓	✓	✓
# Sites	4	8	14	18	40	41

Table 10. *Motif types (other than catfish, jewfish and eel) associated with the study group in type 1 and type 2 site assemblages (✓= motif is present).*

Underlying motifs	Cat-fish	Jew-fish	Eel
Animal	1		2
Anthropomorph	4	2	29
Beehive			1
Bird			3
Boomerang	1		2 *
Crocodile			1 *
Dingo			3
Echidna			2 *
Emu			2
Macropod			4 (4 sites) *
Possum	1		
Quinkan spirit	1		
Red hand stencil			2 sites
Scrub turkey	1		2
Snake	2 (2 sites)	4 (2 sites)	2 (1 site)
Turtle			4 (4 sites)
White hand stencil			3 (1 site)

Table 11. *Motifs underlying eels and catfish in superimpositions; * includes double compositions (see Figs 11c, 11d and 13).*

taposed with a pointed, spike-like object in the 1960s as a symbol of initiation (H. Edwards pers. comm; see Fig. 12), but it is not known whether this interpretation was culturally informed. The Laura Rangers have since recorded the site.

All types include composite, supernatural figures, for example, a catfish-sawfish, an anthropomorph-jewfish (Figs 11a and 11c) and a giant eel with a crocodile's tail. These are likely to represent spirit ancestors (Stories) who, in the founding era, the Story-Time (elsewhere in Australia usually known as 'the Dreaming', see Rigsby 1999), were transformed into species of animals and plants of today (Trezise 1969; Sutton 2011). Morphy (1989: 5) noted that such figures present a 'cultural reality' that may be more revealing than naturalistic representations.

As shown in Table 10, there is no evidence of a patterned association with a particular motif type in the assemblages studied; e.g. eel and jewfish motifs each have a similar (wide) motif range across both site types. Catfish tend not to be painted within relatively small (type 2) assemblages.

Figure 8. *A pair of eel motifs on the lower wall at Giant Wallaroo, locality 3.*

Figure 9. *Composition of eel and snake motifs at Mushroom Rock, locality 2.*

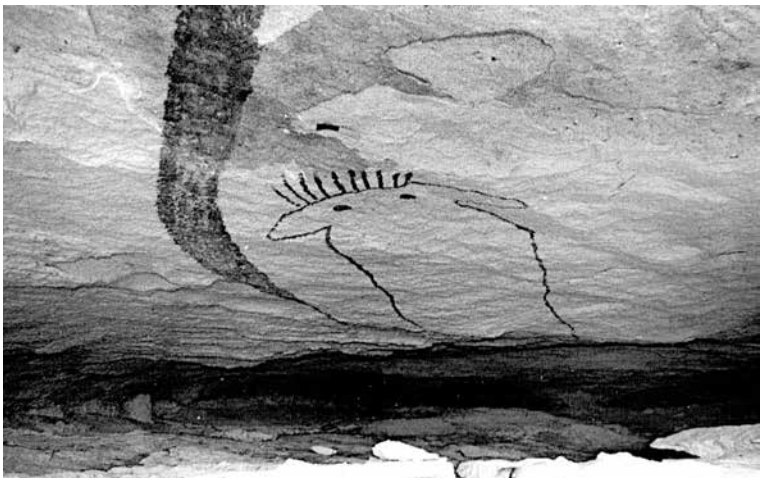

Figure 10. *Giant-sized jewfish and snake motifs at Shepherd Creek, locality 3.*

A shared pattern of overlays with snakes (see Table 11) mirrors patterned juxtapositions that may relate to cultural narratives and/or secular, sorcery functions (see above). A striking set of 'double' superimpositions (with echidna, crocodile, macropod, boomerang, and a replica of itself; see Table 11 and Figs 11b, 11d and 13) appears to be unique to the eel. These suggest esoteric

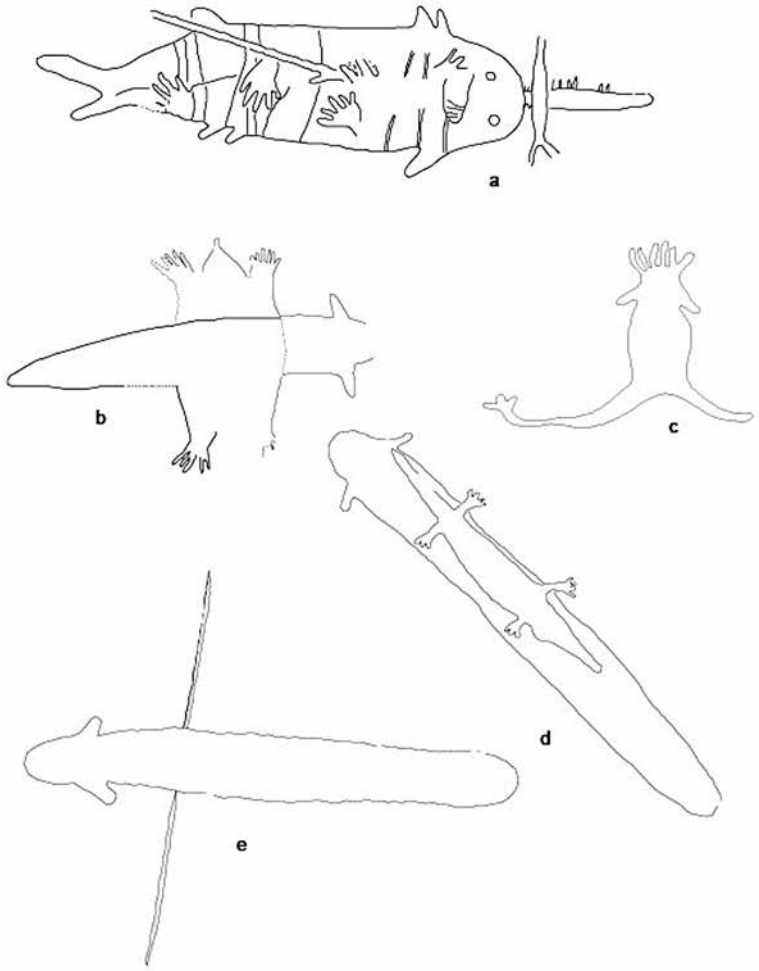

Figure 11. *Composite motifs and double superimpositions in the study area.*

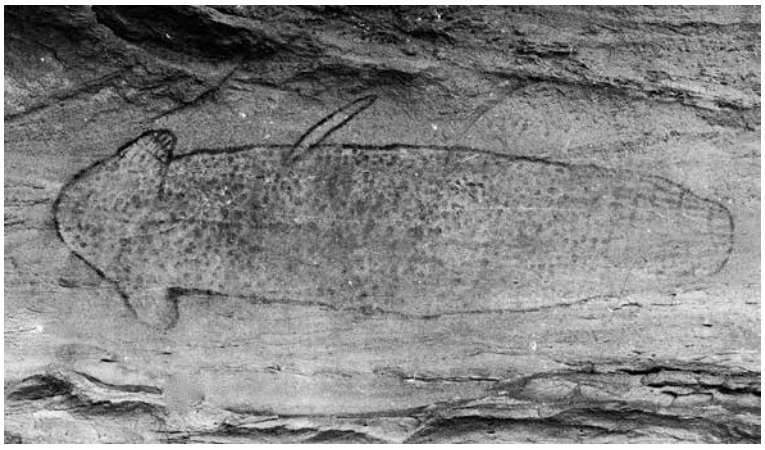

Figure 12. *Composition of eel with spike-like object photographed by H. Edwards, a member of Wright's (1971) Mushroom Rock excavation team.*

Story connections.

Clarifying the labels

Trezise's variable use of the 'eel' and 'catfish' labels can be traced in his seminal monograph (Trezise 1971) and accounts of his journeys and conversations with Aboriginal Traditional Owners in the 1960s. For example, when visiting Mun Gin Creek with Caesar Lee Cheu, 'an artist of the "Gu-gu-Warra" clan', they found shelters with paintings of 'human figures, hand stencils, eels, marsupials, and a dingo' and 'rock wallabies, fish, eels, brolgas or emus, and human figures' (Trezise 1969: 138, 139). In an expedition to the Hann River area with Traditional Owners Willy Long and Joe Musgrave, Trezise (1993: 89–90) recalled finding unusual engravings of 'eels'. These were the same motifs that Trezise (1971: 107–110) labelled as 'eel-tailed catfish' and 'eel-fish'. To obtain cultural information on paintings at the remarkable Quinkans sites near the Laura River, Trezise (1993: 98) requested Willy Long to consult with other Laura elders and 'an old Gugu-Minni man at Hopevale Mission'. Subsequently, Trezise wrote at length about the paintings, e.g. ' … an eel, in dark red with cream outline and dots, about two metres long' (see Fig. 14), various other faunal figures and 'two different species of yams' (Trezise 1993: 98–99). As noted above, Trezise (1971: 9) reported that Laura elders identified certain paintings of 'snakes, eels and catfish' as sorcery symbols.

From such records, we infer that Traditional Owners identified 'eels' and 'catfish' in Laura rock art. The inconsistencies in Trezise's labels may derive from his lack of understanding of Aboriginal categories. Either Trezise neglected to ask Traditional Owners how to distinguish between the motifs, or if he did so, they declined to elaborate. Language barriers and cultural protocols would have hampered this type of cross-cultural communication, particularly if secret knowledge was involved (see Cole 2011).

The contextual analysis outlined above goes some way to clarifying the labels. Importantly the types are linked by their visual (plan view) perspective, a sign of group identity that differentiates them from most other animal motifs that are drawn in profile (cf. Western scientific methods of drawing fish, Fig. 3). Otherwise, the dataset is heterogenous and can be divided into categories, although some divisions are less than clearcut.

The most discrete motif type (fork-tailed) catfish is characterised by a naturalistic form, distinctive painting style and low frequency. In combination, these traits suggest particularly purposeful composition, possibly pertaining to a specialised function for catfish. Although all types have features denoting

ancestral values (see above), it is not clear if 'catfish' as labelled here had sorcery associations, particularly as sorcery compositions with human figures cited and/or illustrated by Trezise (1969, 1971; and see Cole 2010) contain eel, jewfish or snake but not catfish motifs.

Jewfish motifs, although somewhat less complex than paintings of catfish, are also unambiguous. Some, if not most, are likely to reference *N. ater*, a species that Laura people regularly catch in local streams, consider good for food and preferable to eating eels. Many motifs tend to be larger than the fish itself, a not unusual feature in rock art characterised by large, sometimes super-size figures (Cole 2016). If *N. hyrtli* is indicated by sets or clusters of relatively small jewfish motifs (for an example, see Fig. 5), motif size and spatial arrangements may also play a part in species recognition.

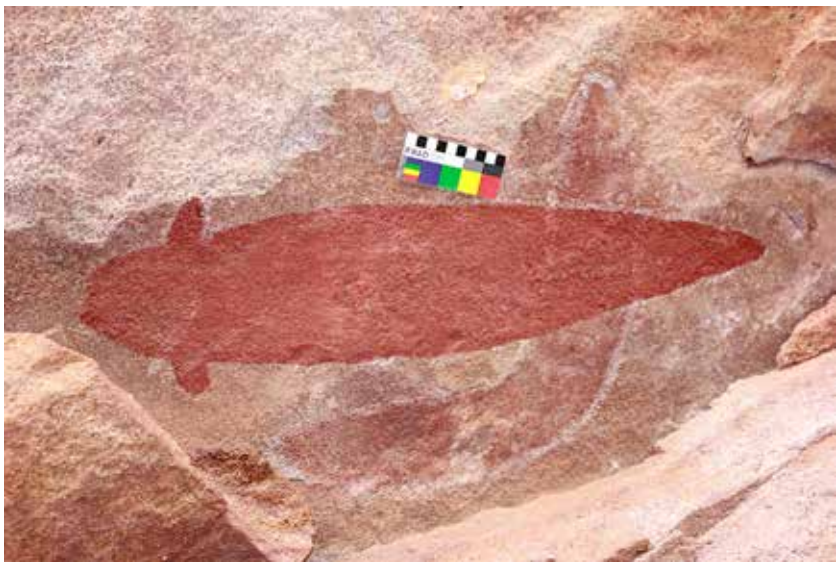

Figure 13. *Eel motif superimposed over boomerang-shaped motif, Little Laura River, locality 3.*

Figure 14. *Eel motif at Quinkans Site B1, Laura River, locality 2.*

Eel motifs lie at the other end of the spectrum of naturalism, reflecting the tendency identified in furred animals (Rosenfeld 1982: 209) for a generalised if not very standardised body form to be 'modified in the direction of anatomical reality'. That is, they exhibit anatomical traits rather than explicit diagnostic features. However, locationally, stylistically and to some extent contextually, they tend to overlap with jewfish. Could a few eel motifs, e.g. those with narrow heads characteristic *of N. ater*, embody ideas of jewfish? In Yolngu bark paintings, the same signifier can encode more than one meaning (Morphy 1991; see also Rosenfeld 1982: 202). In the Yolngu art system, a key to identifying generic categories such as turtles and fish lies in the embedded clan design (Morphy 1991; and see Layton 1991: 189). Although this type of elaboration appears not to occur in Quinkan rock art, certain intra-site compositions and spatial arrangements of eel motifs may contribute to species recognition. Ultimately, cultural meaning may have varied according to the identity and knowledge of the interpreter (Morphy 1991: 145), a principle that may have contributed to Trezise's confusing iteration of eel and catfish labels.

Patterns of motif frequencies and distributions raise questions about selectivity. Why do paintings of eels dominate numerically, and how does this ubiquity contribute to their meaning? Although the pattern may reflect the widespread distribution and unusual capacity of eels to thrive from lower to upper reaches of streams, there is no evidence that the eel was the mainstay of Aboriginal society and economy as in Gunditjmara Country in Victoria (Builth 2006). However, the cultural significance of eels is reflected in ancestral narratives and ceremonies owned by cultural groups in and around the area. For example, protagonists in a 'Koko-Warra' myth include two eels, husbands of parrot and water snake (Roth 1903: 46), and in a Gugu-Yalanji myth (see Trezise 1969: 53), Munnobungle the eel speared Nooramulli the rainbow serpent who made a creek as he crawled away. Koko-Yimidir ceremonies included eel dances and ritual restrictions on eating eels (Roth 1909: 1, 2, 6),

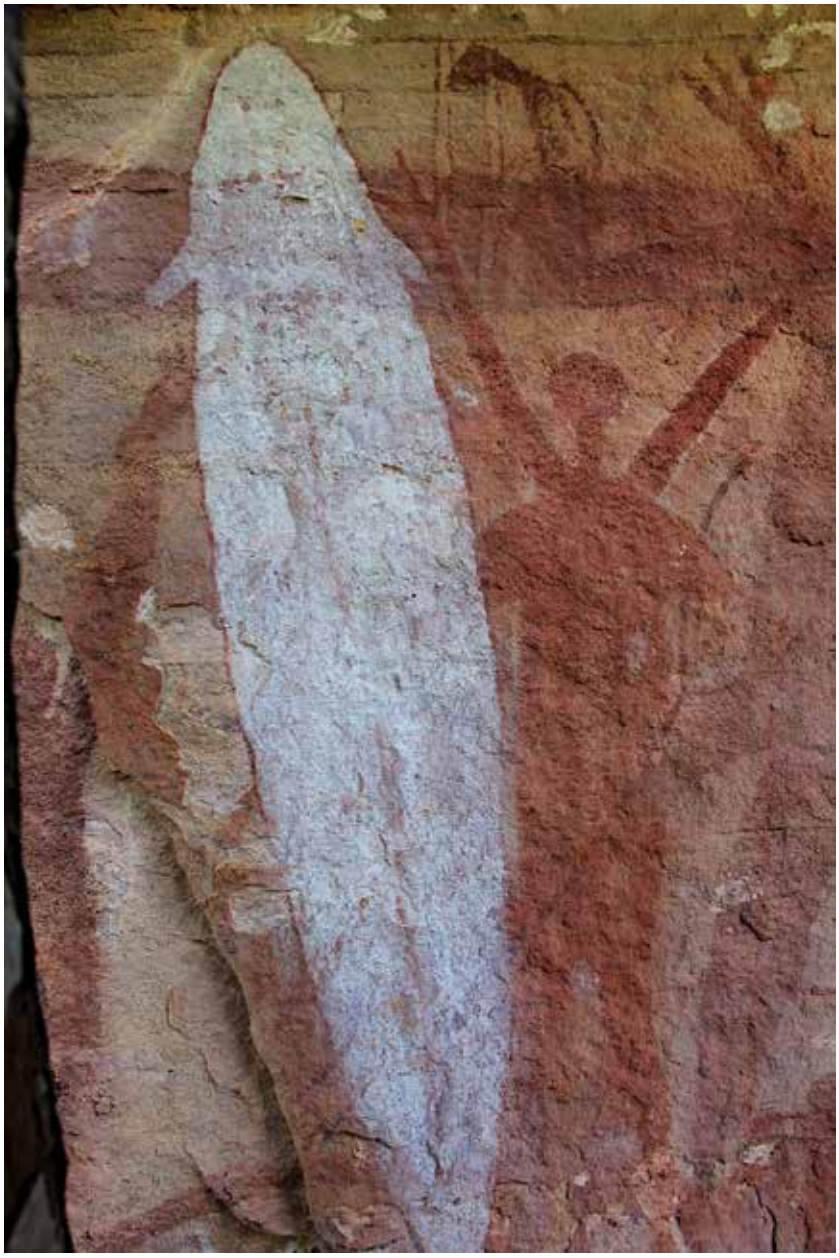

Figure 15. *Eel motif at Giant Wallaroo, Jowalbinna, locality 3.*

and Awu Ara u (Hollow Log language), a Thaypanic clan language, references the artefact used to trap eels (Roth 1901; Rigsby 2003: 4).

Cultural records of catfish and jewfish are too fragmentary to shed light on the values of the related motifs. For example, catfish species appear not to be mentioned in cultural narratives (myths) recorded by Roth (1903) or Trezise (1969, 1973), although totemic associations with generic 'catfish' are noted elsewhere in Cape York Peninsula (e.g. McConnell 1930; Sharp 1939; B. Rigsby pers. comm.). Increase (aka maintenance) ceremonies for totemic species were widely practised (McConnell 1930; Sharp 1939), but concentrations of catfish and jewfish categories in locality 3 are unlikely to be directly linked with such rituals as totemic centres are said to be located where the species flourishes (McConnel 1930).

Conclusions

By studying motif attributes in the context of knowledge of natural fish populations, we have categorised motifs of the dataset as 'catfish', 'jewfish' and 'eel'. Their differential frequencies and distributions appear to reflect cultural values rather than local maps of fish populations. However, the lack of micro-mapping of fish species and their seasonal movements across the Laura River system somewhat qualifies this conclusion. The irregular landscape pattern of motif distribution appears to be less clearcut than that identified by Taçon (1993) in western Arnhem Land, where high frequencies of fish motifs in the north correlate with both environmental patterns and symbolic values.

Analysis revealed that artists embedded visual information to assist type recognition in an uneven mix of anatomical and stylistic attributes and/or trends and associative features such as compositions, superimpositions and arrangements. Subtle trends in size and shape appear to denote species. The restricted contexts and distinctive style of catfish motifs suggest discrete associations, while the wider contexts and overlapping styles of jewfish and eel motifs suggest a continuity of ideas between these evidently related categories. Motivations behind the various patterns remain obscure. Although the analysis of locale, aka site type, was of limited value to image recognition, aspects of territorial organisation and cultural geography that are not discussed here are likely to contribute this type of meaning (e.g. see Taçon 1993; Brady and Bradley 2014).

In fish biology, fork-tailed catfish, eel-tailed catfish and eel are separated into different families and genera; they are also clearly differentiated in the contemporary Laura knowledge system. However, in the rock paintings, distinctions are complex; cf. the singularity of catfish motifs and blurred divisions between 'jewfish' and 'eel'. Across this collective of 'flat' fish motifs, scientific and Aboriginal categories imperfectly correspond.

The eel motif's minimalist style correlates with strong ambiguity traits identified by Trezise (1977) and Rosenfeld (1982) in certain other images of animals. However, the eel category is exceptional in that it includes some of the most stylised, symmetrical and schematic figures in Quinkan art (e.g. Fig. 15).

As noted by Vinnicombe (1995: 95), 'the simpler and more schematic the image, the greater the potential it may carry for complex associations'. Such esoteric values and deep meanings may be reflected in the inconsistencies and vagueness of Trezise's labels. The enigmatic character of the eel motif suggests that it is a powerful, multivocal, interactive symbol in which ambiguity is a positive force (see Munn 1973; Clottes 1989; Gero 2007).

The research confirms that, although identifying faunal species and characterising the related motif types in Laura rock art is complex, the process benefits from morphological and relational analyses concerning animal biology, cultural knowledge and rock art context. Unpacking the iconicity of catfish, jewfish and eel motifs has led to a more nuanced understanding of how, if not why, the artists constructed and composed images to communicate meaning.

Acknowledgments

We progressed this research as part of the Agayrr Bamangay Milbi project funded by the Australian Research Council (LP190100194). The Laura Rangers represent the Laura Aboriginal community in this project. Co-author and Laura community Elder Christine Musgrave is Senior Laura Ranger, and co-author and Laura community Elder Roseanne George is a cultural advisor to the Laura Rangers. We acknowledge the contributions of Traditional Owners, the late Caesar Lee Cheu, Willy Long and Joe Musgrave, Dick Roughsey (Lardil artist from Mornington Island), rock art researcher Percy Trezise and fish biologist Hamar Midgley. We acknowledge the use of Percy Trezise's records and thank Hugh Edwards for permission to use his photograph (Fig. 12). We also thank the five *RAR* peer reviewers whose constructive comments led to this revised, more concise version relating to the Laura area.

Dr Noelene Cole[1,*], Christine Musgrave[2], Roseanne George[2], Professor Lynley Wallis[3], and the Laura Indigenous Land and Sea Rangers[2]

[1] College of Arts, Society and Education, James Cook University, P.O. Box 6811, Cairns, QLD 4870, Australia

[2] c/- The Laura Rangers, 5 George Close, Laura, QLD 4871, Australia

[3] Griffith Centre for Social and Cultural Research, Griffith University, Nathan campus, 170 Kessels Road, Nathan, QLD 4111, Australia

*Corresponding author: *noelene@a-ncole.com*

REFERENCES

Allen, G., S. H. Midgley and M. Allen 2002. *Field guide to the freshwater fishes of Australia*. Western Australian Museum, Perth.

Bednarik, R. 2013. Megafaunal depictions in Australian rock art. *Rock Art Research* 30(2): 197–215.

Brady, L. and J. Bradley 2014. Images of relatedness: patterning and cultural contexts in Yanuwa rock art, Sir Edward Pellew Islands, SW Gulf of Carpentaria, northern Australia. *Rock Art Research* 31(2): 157–176.

Builth, H. 2006. Gunditjmara environmental management: the development of a fisher-gatherer-hunter society in temperate Australia. In J. Kim, C. Grier and J. Uchiyama (eds), *Beyond affluent foragers*, pp. 4–23. Oxbow Books, Oxford.

Chaloupka, G. 1993. *Journey into time: the world's longest continuing art tradition*. Reed, Sydney.

Clegg, J. 1971. A ?'metaphysical' approach to the study of Aboriginal rock painting. *Mankind* 1971: 37–41.

Clegg, J. 1977. A method of resolving problems which arise from style in rock art. In P. Ucko (ed.), *Form in indigenous art: schematisation in the art of Aboriginal Australia and prehistoric Europe*, pp. 260–276. Australian Institute of Aboriginal Studies, Canberra.

Clottes, J. 1989. The identification of human and animal figures in European Palaeolithic art. In H. Morphy (ed.), *Animals into Art*, pp. 21–56. Unwin Hyman, London.

Cole, N. 1988. The rock art of Jowalbinna. Unpubl. BA (Hons) thesis, Department of Anthropology and Archaeology, James Cook University, Cairns.

Cole, N. 1995. Rock art in the Laura-Cooktown region, S.E. Cape York Peninsula. In M. Morwood and D. Hobbs (eds), *Quinkan prehistory: the archaeology of Aboriginal rock art in S.E. Cape York Peninsula, Australia*, pp. 51–70. Tempus 3. Anthropology Museum, University of Queensland, St Lucia.

Cole, N. 2010. Painting the police: Aboriginal visual culture and identity in colonial Cape York Peninsula. *Australian Archaeology* 71: 17–28.

Cole, N. 2011. Rock paintings are stories: rock art and ethnography in the Laura region, Cape York Peninsula. *Rock Art Research* 28(1): 107–116.

Cole, N. 2016. Regions without borders: related rock art landscapes of the Laura Basin, Cape York Peninsula. In J.-C. Verstraete and D. Hafner (eds), *Land and language in Cape York Peninsula and the Gulf Country*, pp. 61–84. John Benjamins Publishing Company, Amsterdam/Philadelphia.

Cole, N. 2022. Aboriginal rock art of the Laura valleys: one landscape, many Stories. In P. Taçon, S. May, U. Frederick and J. McDonald (eds), *Histories of Australian Rock Art Research*, pp. 257–275. Terra Australis 55, The Australian National University, Canberra.

Cole, N. and A. Watchman 1996. Archaeology of white hand stencils of the Laura region, Cape York Peninsula, north Queensland. *Techne* 3: 82–90.

David, B. 1994. A space-time Odyssey: rock art and regionalisation in north Queensland prehistory. Unpubl. PhD thesis, Department of Anthropology and Sociology, The University of Queensland, St Lucia.

DES (Department of Environment and Science, Qld) 2022. Normanby Drainage Basin. Retrieved 28 Nov. 2022 from *https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/basin-normanby/*.

Dibden, J. 2019. *Drawing in the land: rock art in the Upper Nepean, Sydney Basin, New South Wales*. Terra Australis 49, The Australian National University, Canberra.

Flood, J. 1987. Rock art of the Koolburra Plateau, north Queensland. *Rock Art Research* 4(2): 91–126.

Gero, J. M. 2007. Honoring ambiguity/problematizing certitude. *Journal of Archaeological Method and Theory* 14(3): 311–327.

Gunn, R. G., B. David, J. J. Delannoy, B. Smith, A. Unghangho, I. Waina, Balanggarra Aboriginal Corpo-ration, L. Douglas, C. Myers, P. Heaney, S. Ouzman, P. Veth and S. Harper 2022. Superpositions and superimpositions in rock art studies: reading the rock face at Pundawar Manbur, Kimberley, northwest Australia. *Journal of Anthropological Archaeology* 67: 1–23.

Herbert, B. and J. Peters 1995. *Freshwater fishes of far north*

Queensland. Department of Primary Industries, Brisbane.

Jones, A. M. and M. Díaz-Guardamino 2018. Enigmatic images from remote prehistory: rock art and ontology from a European perspective. In B. David and I. J. McNiven (eds), *The Oxford handbook of the archaeology and anthropology of rock art*, pp. 481–502. Oxford University Press, New York.

Layton, R. 1991. *The anthropology of art* (2nd edn). Cambridge University Press, Cambridge.

Lewis, D. 2015. First record of the Indonesian short-finned eel in Arnhem Land rock art. *Rock Art Research* 32(2): 244–248.

May, S. and I. Domingo Sanz 2010. Making sense of scenes. *Rock Art Research* 27(1): 35–42.

McConnel, U. 1930. The Wik-Munkan tribe. Part II. Totemism. *Oceania* 1(1): 97–125, 181–205.

Midgley, H. 1990. Shepherd Creek and a major tributary, Brady Creek, part of the Little Laura River catchment of the Normanby River system Cape York Peninsula: a brief bio-resource study of some aquatic fauna and water characters. Unpubl. report prepared for N. Cole.

Morphy, H. 1989. Introduction. In H. Morphy (ed.), *Animals into Art*, pp. 1–20. Unwin Hyman, London.

Morphy, H. 1991. *Ancestral connections: art and an Aboriginal system of knowledge*. University of Chicago Press, Chicago.

Morwood, M. J. 2002. *Visions from the past: the archaeology of Australian Aboriginal art*. Allen and Unwin, Crows Nest.

Munn, N. 1973. Symbolism in ritual context: aspects of symbolic action. In J. J. Honigmann and A. Allard (eds), *Handbook of social and cultural anthropology*, pp. 573–612. Rand McNally, Chicago.

Pusey, B., M. Kennard and A. Arthington 2004. *Freshwater fishes of north-eastern Australia*. CSIRO Publishing, Collingwood.

Pusey, B., D. Burrows, M. Kennard, C. Perna, P. Unmack, Q. Allsop and M. Hammer 2017. *Freshwater fishes of northern Australia*. Zootaxa 4253, Magnolia Press, Auckland.

Rigsby, B. 1999. Aboriginal people, spirituality and the traditional ownership of land. *International Journal of Social Economics* 26: 963–972.

Rigsby, B. 2003. Languages of the Quinkan and surrounding region. Unpubl. report prepared for the Quinkan Regional Cultural Centre.

Rosenfeld, A. 1982. Style and meaning in Laura art: a case study in the formal analysis of style in prehistoric art. *Mankind* 3(3): 199–217.

Roth, W. 1901. *Food: its search, capture and preparation*. North Queensland Ethnography Bulletin 3, Government Printer, Brisbane.

Roth, W. 1903. *Superstition, magic and medicine*. North Queensland Ethnography Bulletin 5, Government Printer, Brisbane.

Roth, W. 1909. *On certain initiation ceremonies*. North Queensland Ethnography Bulletin 12, Government Printer, Brisbane.

Sefton, C. 2013. Molluscs and fish in the rock art of the coast, estuary and hinterland of the Woronora Plateau, NSW. *Rock Art Research* 30(1): 97–102.

Sharp, L. 1939. Tribes and totemism in north-east Australia. *Oceania* 9(3): 254–275.

Sutton, P. 2011. Cape York Peninsula Indigenous Cultural Story: preliminary outline. Unpubl. report prepared for the Commonwealth Department of the Environment.

Taçon, P. 1988. Identifying fish species in the recent rock paintings of western Arnhem Land. *Rock Art Research* 5(1): 3–15.

Taçon, P. 1989. Art and the essence of being: symbolic and economic aspects of fish among the peoples of western Arnhem Land, Australia. In H. Morphy (ed.), *Animals into Art*, pp. 236–252. Unwin Hyman, London.

Taçon, P. 1993. Regionalisation in the recent rock art of western Arnhem Land, Northern Territory. *Archaeology in Oceania* 27(3): 105–152.

Taçon, P. and C. Chippindale 1998. An archaeology of rock-art through informed methods and formal methods. In C. Chippindale and P. Taçon (eds), *The archaeology of rock-art*, pp. 1–9. Cambridge University Press, Cambridge.

Trezise, P. 1969. *Quinkan Country: adventures in search of Aboriginal paintings in Cape York*. A.H. and A.W. Reed, Sydney.

Trezise, P. 1971. *Rock art of south-east Cape York Peninsula*. Australian Institute of Aboriginal Studies, Canberra.

Trezise, P. 1973. *Last days of a wilderness*. Collins, Sydney.

Trezise, P. 1977. Representations of crocodiles in Laura art. In P. Ucko (ed.), *Exploring the visual art of Oceania: schematisation in the art of Aboriginal Australia and prehistoric Europe*, pp. 325–333. Australian Institute of Aboriginal Studies, Canberra.

Trezise, P. 1993. *Dream road: a journey of discovery*. Allen and Unwin, St Leonards.

Vinnicombe, P. 1995. Perspectives and traditions in Australian rock art research. In K. Helskog and B. Olsen (eds), *Perceiving rock art: social and political perspectives*: *ACRA the Alta Conference on Rock Art*, pp. 87–103. Novus Forlag, Instituttet for Sammenlignende Kulturforskning, Oslo.

Wright, R. 1971. Prehistory in the Cape York Peninsula. In D. J. Mulvaney and J. Golson (eds), *Aboriginal man and environment in Australia*, pp. 133–140. The Australian National University, Canberra.

RAR 40-1435