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ORIGINAL ARTICLE

# Unshrouding Narratives, Beliefs, and Practices Related to the Aye-aye (*Daubentonia madagascariensis*) in Eastern Madagascar

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## Abstract

Ethnoprimatology emphasizes the complex sociocultural dimensions of human-alloprimate interactions, often overlooked in conservation practices and narratives shaped by ecological perspectives alone. In Madagascar, lemurs are deeply embedded in local traditions structured around taboos, legends, and kinship beliefs. Among them, the aye-aye (*Daubentonia madagascariensis*) is frequently subject to a narrative portraying it as an evil animal, an omen, or a harbinger of misfortune. Yet, cultural representations of the aye-aye across Madagascar are far more diverse. While some reports describe ritual killings, others recount respectful mortuary practices bestowed upon these primates. We explored the beliefs, narratives, and practices associated with the aye-aye in three regions of eastern Madagascar. Drawing on a mixed-methods approach, we combined quantitative and qualitative data from 219 semistructured interviews with grounded theory methodology and developed an interpretive framework for understanding the species' cultural representations. Our results revealed a wide variety of traditions, including magical and therapeutic uses of aye-aye body parts and three legends underpinning these belief systems. We propose that these traditions stem from the belief that the aye-aye is inhabited by a spirit, whether evil or ancestral. Responses to its perceived nefarious powers vary from ritual display of the killed animal to mortuary practices comparable to human funerals. These findings urge a shift away from reductive narratives long popularized in recent decades, recognizing complexity and site-specificity. Similar to other contemporary ethnoprimatologists, we advocate for a cautious, context-sensitive approach to both reporting lemur-related traditions and designing conservation programs, emphasizing the need for carefully considering the religious systems that underlie practices involving threatened species.

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## Introduction

Across the world, many alloprimate species (i.e., nonhuman primates overlapping spatially and ecologically with humans; Fuentes, 2012) hold a place within religious systems, mythological narratives, and folkloric traditions (Alves *et al.*, 2016; 2017; Cormier, 2017; Peterson, 2016; Veracini & Wood, 2024). Cultural representations of alloprimates vary considerably: in some traditions, harming them is taboo (Colding & Folke, 2001; Saj *et al.*, 2006; Sicotte 2016), while in others, they are considered ill omens associated with misfortune and calamity (Gnanaolivu *et al.*, 2022; Knight, 1999), and killing them is deemed acceptable (Nekaris & Jayewardene, 2004). Alloprimates are portrayed as prophetic signs or protectors, animals with human qualities or demons, reincarnated humans or ancestors in animal form (Alves *et al.*, 2016; 2017). They also feature in creation and origin myths (e.g., spider monkeys *Ateles* sp. in Brazil and howler monkeys *Alouatta* sp. in Mayan culture; Conklin, 2001; Sax, 2001). In some cultures, specific alloprimates are considered sacred (e.g., northern plains gray langur *Semnopithecus entellus* in India and long-tailed macaques *Macaca fascicularis* in Bali; Lutgendorf, 2024; Peterson & Riley, 2017) and are believed to hold supernatural or shamanic powers (e.g., pygmy marmosets *Cebuella* sp. and capuchin monkeys *Cebus* or *Sapajus* sp. in Peru; Shepard, 2002) and to possess spirits (Vilaça 2002). Alloprimates are deeply rooted in spiritual systems, in which they can be represented as mediators between humans and deities or spirits (e.g., Japanese macaques *Macaca fuscata* in Japan; Knight, 1999) or be considered divine themselves (Alves *et al.*, 2017). In addition to their spiritual roles, at least 101 primate species are believed to have therapeutic effects in traditional folk medicine or are used in magic-religious practices (Alves *et al.*, 2010). In Africa and in South America, some alloprimate species are respected to the extent that they are recipients of burial practices (e.g., in Ghana and in the Amazon; Saj *et al.*, 2006; Valero, 1984).

This wide diversity of representations is also evident in Madagascar, where endemic lemurs are deeply embedded in local traditions (e.g., indri *Indri indri* and Verreaux's sifaka *Propithecus verreauxi*; Abinal & La Vaissière, 1885; Grandidier, 1868). In Madagascar, animistic traditions assign significant importance to *fady*, a broad category of cultural prohibitions or taboos that may concern people, places, actions, food, or animals (Dahl, 1999; Ruud, 1960). *Fady* constitutes a dynamic and creative system with significant variability between ethnic groups, villages, families, and even individuals (Golden & Comaroff, 2015a; b). Most *fady*(s) are handed down from ancestral times and are passed on orally, in most cases through a *tantara* (Anania *et al.*, 2018; Ruud, 1960). The *tantara* is a legend, a narrative associated with specific events of the past, which is regarded as true by those who transmit it and conveys culturally significant messages or moral lessons (Jaovelo-Dzao, 1996; Harpet, 2011). Several *tantara*(s) identify lemurs as the descendants of a person that in ancient times metamorphosed and populated forests, leading to the belief that

lemurs have a human origin (Anania & Donati, 2024). For this reason, lemurs such as Perrier's sifaka (*Propithecus perrieri*) and Verreaux's sifaka are considered *fady* in some areas and cannot be killed or consumed (Anania *et al*., 2018; Harpet, 2011).

Making sense of the complexity of lemur representations, and more broadly of alloprimate representations, requires a theoretical lens integrating both biological and symbolic dimensions. Ethnoprimatology offers such a framework, enabling researchers to explore ecological and sociocultural interconnections and challenge established paradigms in primatology (Fuentes, 2012; Jost Robinson & Remis, 2018). Ethnoprimatology seeks to reveal how cultural identities and personal beliefs are shaped and expressed through these relationships (Jost Robinson & Remis, 2018). This culturally grounded perspective emphasizes the cultural significance of alloprimates beyond utilitarian roles (Humble & Hill, 2016), often overlooked in conservation discourse. By incorporating synergistic methods from field primatology, human ecology, ethnography, sociocultural anthropology, and folklore studies (Fuentes, 2012), and combining quantitative and qualitative data from interviews in a mixed-methods approach (Fopa *et al*., 2020; Nash *et al*., 2016), researchers can uncover the nuanced motivations behind human behaviors and representations influencing human-alloprimate interactions. Without a deep understanding of local cultural and religious systems through a decolonized, nonreductive lens (Jost Robinson & Remis, 2018), there is a risk of oversimplifying such complexity into the mere frequency of a conservation-relevant human behavior or generalized statements (Fuentes, 2006). This may lead to cultural essentialization, functional conceptualization of taboos, or an overemphasis on conflicting local-foreigner cultural systems with both ethical and practical consequences for conservation outcomes (Colding & Folke, 2001; Osterhoudt, 2018; West & Brockington, 2006). Comparative ethnographic analyses of interview-based data from different regions can help counteract these tendencies and support more grounded, culturally respectful forms of coexistence (Setchell *et al*., 2017).

Within this framework, the aye-aye (*Daubentonia madagascariensis*), a relatively large nocturnal primate from Madagascar, stands out as a compelling case study, combining conservation urgency with deep cultural significance. This species is classified as Endangered by the IUCN (Louis *et al*., 2020), with habitat loss being its primary threat, but it is also hunted due to its perceived impact on crops and poultry, as a source of food, and for belief-related reasons (Andriamasimanana, 1994; Mittermeier *et al*., 2010; Louis *et al*., 2020). The aye-aye is culturally remarkable as the subject of a complex tradition of Malagasy beliefs and associated practices. Morphological, behavioral, and psychological explanations for the origin and spread of aye-aye-related beliefs have been proposed (Decary, 1950; Randimbiharinirina *et al*., 2021; Simons & Meyers, 2001; Fig. S1 in supplementary data). The aye-aye has evolved a variety of anatomical traits, including chisel-like incisors and a long probing and flexible third digit (Sterling & McCreless, 2006). It also has large ears and mainly black hair, a color that is traditionally linked to evil spirits among the Malagasy (Leib, 1947). The unusual appearance possibly contributes to some people perceiving it as scary, threatening, ugly, or unpleasant (Dibbets *et al*., 2015; Rakotomamonjy *et al*., 2015; Simons & Meyers, 2001). Moreover, this species is solitary and nocturnal, living at low densities, and has extensive home ranges (Mittermeier *et al*.,

2010; Sterling & McCreless, 2006), all factors contributing to the rarity of sightings (Louis *et al*., 2020; Rand, 1935).

Across Madagascar, traditions associated with the aye-aye vary from village to village (Durrell, 1992; Randimbiharinirina *et al*., 2021) and even within the same geographic area (Glaw *et al*., 2008). Sighting an aye-aye is commonly associated with misfortune, illness, and even death (Koenig, 2005; Simons & Meyers, 2001). As such, the species is often depicted either as an omen or as the direct cause of an event (Simons & Meyers, 2001). Villagers often associate the rare sightings of the animal with negative events (e.g., illness or the sudden death of a community member), which are interpreted through a perceived cause-and-effect relationship shaped by a psychological mechanism known as pseudo-contingency (Randimbiharinirina *et al*., 2021). This relationship is then reinforced in community perception through narratives. The aye-aye is also considered capable of evil acts, such as plucking out eyes (Koenig, 2005), killing (Goodman & Schütz, 2000), and eating people (Simons & Meyers, 2001). To neutralize the perceived evil, in northwestern and northeastern Madagascar, drastic actions are often undertaken, such as killing the animal or burning down or abandoning the village (Glaw *et al*., 2008; Petter & Peyrieras, 1970; Petter, 1977; Simons & Meyers, 2001). However, the perceived image of the aye-aye throughout Madagascar is remarkably complex, and it can even be revered as an emblem of fertility and good luck (Feistner & Sterling, 1994). In eastern Madagascar, some Betsimisaraka people traditionally consider the aye-aye as the embodiment of their forefathers (Shaw, 1882), while other people from the Betsimisakara and Tanala groups believe that it belongs to an evil spirit that would exact revenge in the case of being killed (Britt, 2002; Ruud, 1960). Because of these beliefs, in some eastern areas, killing and eating the aye-aye is taboo (Britt, 2002; Harpet, 2022; Ruud, 1960; Shaw, 1882). Reports of human-animal kinship beliefs, as well as mortuary practices dedicated to the aye-aye, have appeared sporadically since 1882 (Andriamasimanana, 1994; Britt, 2002; Jolly, 2015; Lamberton, 1911; Shaw, 1882; Sterling & Feistner, 2000).

Over the past 25 years, field biologists have repeatedly reported the killing of aye-ayes and displays of the dead body or tail outside villages (Glaw *et al*., 2008; Goodman & Schutz, 2000; Goodman, 2015; Koenig, 2005; Koenig & Zavasoa, 2008; Lehman & Wright, 2000), a practice that was historically rarely described in the literature (Rand 1935). Owing to the conservation relevance, scholars and popular writers have popularized a narrative around negative local attitudes and beliefs depicting an evil aye-aye and killing by communities (Rabemananjara *et al*., 2025; Randimbiharinirina *et al*., 2021), sometimes labelling the phenomenon as "persecution" (Beattie *et al*., 1992) driven by superstition (Cohn, 1993). Two recent articles have attempted to challenge this simplistic narrative through surveys and expert interviews in northeast Madagascar, revealing neutral or positive attitudes and linking some of these positive perceptions to the lemur's perceived ecological role (Rabemananjara *et al*., 2025; Randimbiharinirina *et al*., 2021).

The contradictory perceptions, supernatural representations, and the reasons for hunting the aye-aye make it a suitable model to represent the complexity of the human-alloprimate interface in rural Madagascar. Here, we explore the complexity and diversity of narratives, beliefs, and practices associated with the aye-aye across

three regions in eastern Madagascar. Through semistructured interviews, we collected qualitative data to examine local traditions and representations of the species. Following key procedures associated with the grounded theory approach (Lingard *et al*., 2008), we integrated emergent themes from interview coding with insights from the existing literature to develop an interpretive framework on the perceived nature (e.g., representations) of the aye-aye.

## Methods

### Study Areas

To investigate the diversity of traditions related to the aye-aye across eastern Madagascar, we selected sites from the species' northernmost and southernmost ranges to include traditions that are likely more independent. We conducted our research in three regions in villages adjacent to relatively large, protected areas. From north to south, these are Masoala National Park and Makira Natural Park (Masoala-Makira) in the northeast, Maromizaha Protected Area and Vohimana Reserve (Maromizaha-Vohimana) in the central-east, and Tsitongambarika Protected Area (Tsitongambarika) in the extreme southeast (Fig. 1). Each of these forested areas is known to host aye-aye populations (Anania *et al*., 2020; Balestri *et al*., 2017; Golden, 2009; Ralison *et al*., 2015; Sawyer *et al*., 2017) and have low (Masoala-Makira) or no (Tsitongambarika) hunting pressure on this species (Borgerson *et al*., 2022; Campera *et al*., 2019). These areas are populated mostly by people of the Betsimisaraka (north- and central-east) and Antesaka (south) ethnic groups, with several minorities present throughout (Table I). All areas are inhabited by agriculturalists that also subsist on small-scale farming, hunting, and gathering. Local people within each area are accustomed to the presence of tourists, researchers, and representatives of rural development and conservation NGOs. While Masoala, Makira, and Tsitongambarika are in relatively remote areas, Maromizaha and Vohimana are in an easily accessible and touristic region of Madagascar.

### Literature Review

We conducted a literature review with a broad and exploratory scope, guided by the principles of a scoping review, with the aim of mapping existing beliefs, narratives, and ritual practices associated with the aye-aye in Madagascar. The review included both primary and secondary sources. We used a defined Boolean string ("aye-aye" OR "*Daubentonia madagascariensis*") AND (fady OR taboo OR kill* OR luck OR misfortune OR funeral OR ancestor* OR evil), applied to sources indexed in Web of Science and Google Scholar. We then enriched the review through a targeted manual search of additional English- and French-language sources, including grey literature, historical texts, and regionally relevant archives, at the University Library in Antananarivo and across online reference platforms and search engines, including AnthroSource, MadaRevues, Google Books, Gallica BnF, Persée, Biodiversity

**Table I** Locations in Madagascar where we conducted interviews concerning traditions related to the aye-aye, including sample sizes and data collection periods for each site

| | **Masoala / Makira** | **Maromizaha / Vohimana** | **Tsitongambarika** |
|---|---|---|---|
| **Region** | North-east | Central-east | South-east |
| **Forest protection status** | National Park / Natural Park | Protected Area / Experimental Reserve | Protected Area |
| **Hunting pressure on the aye-aye** | Masoala: very low (<1,000 ind. per year)[1] Makira: low (<10,000 ind. per year)[1], food *fady* for 11% interviewees[2] | No reports. Absent in the nearby Mantadia National Park[1] | Not hunted for food[3] |
| **Most represented ethnic group** | Betsimisaraka (Betanimena) | Betsimisaraka | Antesaka |
| **Minority ethnic groups** | Tsimihety, Makoa, Antimorona, Ranginaly/Maritandrano | Bezanozano, Merina | Antanosy, Tavaratsy |
| **Data collection** | | | |
| **Period** | Sep 2020 | Apr-Aug 2018 | Jun 2016 |
| **N participants** | 57 | 90 | 72 |
| **N villages** | 8 | 16 | 12 |
| **Sex (M/F)** | M (86%), F (14%) | M (80%), F (20%) | M (100%) |
| **Declared age range (years)** | 34-90 | 18-100 | 19-90 |
| **Declared age mean ± SD (years)** | 66 ± 13 | 48 ± 17 | 42 ± 17 |

[a] Borgerson *et al.*, 2022;[b] Golden & Comaroff, 2015a;[c] Campera *et al.*, 2019. Aye-aye illustration by Stephen Nash

Heritage Library, and Internet Archive. The final dataset incorporated both peer-reviewed and nonpeer-reviewed sources, including articles, theses, and books written in English or French by naturalists, biologists, anthropologists, ethnologists, and missionaries. An initial review in 2016 yielded 85 sources, which we updated in 2025 with newly available works, resulting in a total of 114 references (Table S01). We discarded the negative events associated with encountering an aye-aye and recognized 23 themes (Table S02).

## Interviews

We performed 219 interviews across 36 villages between 2016 and 2020 (Table I). We sampled households opportunistically, moving from one household to the next in which a member was willing to participate. We used convenience sampling, selecting individuals who were available in the village at a given time (Babbie, 2010). Prior to starting interviews, we directly informed local authorities, such as *fokontany*

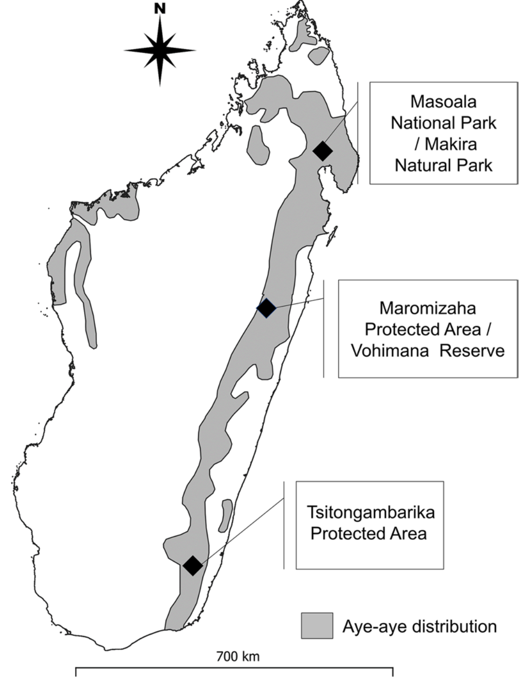


**Fig. 1** Approximate location of study sites in relation to the distribution of the aye-aye (*Daubentonia madagascariensis*) throughout Madagascar (spatial information from Louis *et al*., 2020).

presidents, about the project and obtained their permission to conduct the study. The interview setting was informal. As we expected elders to remember more details about legends and traditional practices, we attempted to include people older than 60 years as often as possible (age classes: 18–40 years: $n$ = 69, 32%; 41–60 years: $n$ = 85, 39%; 61–80 years: $n$ = 52, 24%; 81–100 years: $n$ = 11, 5%). We invited men (193/219, 88%) and women (26/219, 12%) to participate, except in Tsitongambarika where all participants were men, as advised by the translator owing to the local cultural paradigm. This gender bias in participation is explained by the fact that women often preferred their husband or the householder to be interviewed, either because they were busy or because they declared they never go to the forest, so they did not know wildlife well. We do not expect this bias to influence our dataset significantly, as in Madagascar, when a man and woman constitute a couple, they often respect each other's *fady*(s) (Golden & Comaroff, 2015a), and women typically adopt their husbands' *fady*(s) (R. Randriantsara, personal communication). In addition, women's *fady*(s) are reported to not differ from men's in either number or content (Lambek, 1992).

Six interviewers conducted nearly all interviews in the local Malagasy dialect except four that we conducted in French, as both interviewer (AA) and participant were fluent. Different interviewers conducted the interviews in each region. In Masoala-Makira, the interviewer (DCR), a Malagasy man well-known and respected within the targeted communities, was not assisted by a translator. In Maromizaha-Vohimana, the interviewer (AA) was a European man, while in Tsitongambarika,

the interview team (JFM, FB, MC, MP) included both a Malagasy man (who also served as translator) and European men and women. In Maromizaha-Vohimana, translators included two guides from a local association and the site manager (EA) of the NGO active in Vohimana. All translators in this project were Malagasy men, familiar with the local dialects and customs, and known by the community.

Given the existence of aye-aye killing practices in some villages (Jolly, 2015; Simons & Meyers, 2001), before conducting interviews, interviewers ascertained from local guides and translators that the beliefs and practices related to the aye-aye were not regarded as sensitive topics and that people were open to speaking freely. Interviewers did not formulate the questions to point directly to practical remedies for repelling the aye-aye evil powers that include killing. Our interview questionnaire incorporated three main themes identified in the literature review (i.e., being *fady*, being a bringer or harbinger of misfortune, and funeral practices; Table S03), while we took the remaining 20 themes (e.g., being the embodiment of ancestors) into account during the conversational section. Following grounded theory principles (Lingard *et al.*, 2008), we developed more specific questions in situ during the unstructured portion of the interviews. Sample sizes varied for each topic as some participants were unable to answer certain questions. Differences between interviewers led to slight variations in the form of the conversations but each interview had a common semistructured approach that included three major sections.

After receiving informed consent to participate and recording demographic data (age, sex), the interview began with participants' familiarity with the aye-aye (1. Identification) (Table S03). We asked each participant to name the animal shown in a color photo. If the participant was unable to do so, we asked whether they were familiar with an animal called the aye-aye. Because the aye-aye is nocturnal and rarely observed, some participants could be familiar with beliefs and stories associated with the animal but not with its appearance. If the participant could neither recognize the animal from the picture nor recall the animal associated with the name aye-aye, we ended the interview and did not include the interview in analysis. Otherwise, we asked if the participant had ever seen an aye-aye in the area. The second section (2. Normative knowledge) of the interview included specific questions about perceptions of the aye-aye: the *fady* status and norms about killing or eating it. The third, less-structured section of the interview (3. Narratives, beliefs, and practices) invited participants to share *tantara*(s) about the aye-aye, typically resulting in a variety of narratives (including legends, family stories, and witnessed events) as well as beliefs and practices. Depending on the participant's state of knowledge and willingness to share information, the interview could take on a conversational form. This allowed us to ask relevant follow-up questions for further depth and detail, such as about misfortune beliefs and mortuary practices. In accordance with the principles of theoretical sampling (Strauss & Corbin, 1991), we progressively incorporated certain topics and questions that emerged spontaneously during the final section (e.g., connection between the aye-aye and the *tromba* spirit) into the questionnaire for subsequent interviews, particularly in Masoala-Makira, the last area to be sampled.

## Analysis

We considered mixed quantitative-qualitative analysis as the most suitable to answer our questions and identify common themes across the studied areas. This analysis allowed us to keep as much detail as possible and not neglect the rarer themes. The use of this method is becoming increasingly common in ethnoprimatology and conservation research (Rust *et al.*, 2017; Setchell *et al.*, 2017). We used descriptive statistics to provide quantitative estimates related to animal identification and the *fady* and norms associated with the aye-aye (data from sections 1 and 2). We also quantified the reasoning around norms on killing and consumption.

The third section became more refined and focused as the study progressed, so we conducted qualitative analysis, guided by procedures drawn from the grounded theory approach (i.e., iterative questioning, coding, constant comparison, theory building). This approach has previously been used to explore attitudes towards animal usage (Knight *et al.*, 2003). Without developing specific hypotheses to test beforehand, we identified topics and themes as they emerged from the interviews (Lingard *et al.*, 2008). We assigned each participant and each area an alphanumeric code. We transcribed all qualitative data recorded from both the structured and unstructured parts of the interviews into a table and assigned statements to the following categories: norms on killing and consumption, beliefs, legends, first-hand accounts, magic and therapeutic practices, and mortuary practices (Fig. 2). We coded all data using questions specific for each category. As the beliefs and the mortuary practices turned out to be numerous, we read the reasoning for these two categories several times and made a list of themes, key concepts, epithets, beliefs, and operational stages. To identify all potential themes and maintain the highest possible level of detail for the theory building, we included all statements. For beliefs concerning the aye-aye's role in causing or preceding events, we used "open coding" (Strauss & Corbin, 1991) and divided each statement into a maximum of five segments: first, we coded the type of contact with the aye-aye, followed by the condition under which an event would be triggered, a possible secondary condition, the consequences, and the possible counteractions undertaken to prevent a bad event. We also divided the descriptions of mortuary practices into smaller segments (open coding), and through repeated reading and "constant comparison" (Strauss & Corbin, 1991), we identified a list of segment types (funeral stages) emerging from the texts. We first coded the circumstances of death and then assigned all segments to the identified funeral stages (not necessarily in chronological order): body treatment; speech; ceremony and celebration; transfer of the body to its final destination. Finally, we allocated descriptive codes to segments. To identify the most common funeral stages in the three areas, we quantified their prevalence. By interpreting our data and integrating it with information from the literature, we constructed a theory of cultural representations of the aye-aye at our study sites.

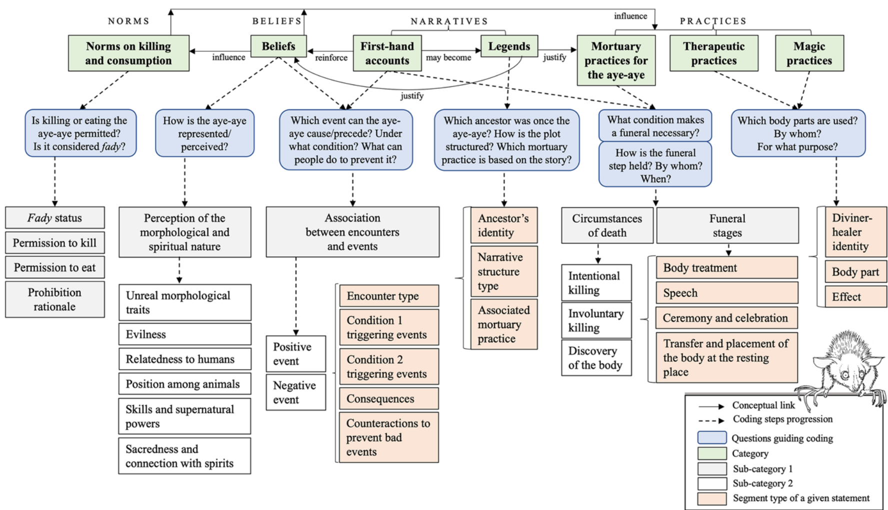


**Fig. 2** Coding template used for qualitative analysis of traditions related to the aye-aye in three regions of Madagascar (2016–2020). We first assigned each statement to one of the mutually exclusive main categories. When applicable, we then further classified it into subcategory 1 and subcategory 2. In some cases, we broke statements down into smaller segments, based on predefined segment types. Aye-aye illustration by Stephen Nash.

## Ethical Note

Participation was entirely voluntary, and we intentionally kept the interviews simple to maximize participation (White *et al*., 2005). Before each interview, we explained the general aspects and aims of the study to participants, in some cases with the help of a local translator, emphasizing that participation was completely anonymous. Owing to the low literacy rate throughout the study areas, we did not ask for written consent and we obtained verbal confirmation to participate (McQueen & Knussen, 2002). To protect participant confidentiality and eliminate any legal risks due to the potentially sensitive nature of responses, we recorded limited demographic data and do not provide any participant or village identifying information. This study received ethics approval from Oxford Brookes University and followed the University's "Code of Practice on Ethical Standards for Research involving Human Participants."

**Data Availability** The datasets generated or analyzed during the current study are available from the corresponding author on reasonable request. Selected data are available in the supplementary information file.

## Results

### Species Sighting and Fady Status

A total of 38% (84/219) of all participants stated that they had seen an aye-aye, either alive or dead, in their area. More specifically, 38 of 57 participants observed the aye-aye in Masoala-Makira (67%), 19 of 90 participants (21%, no answer = 5) in Maromizaha-Vohimana, and 27 of 72 participants (38%) in Tsitongambarika.

Most participants (88%, 169/191) considered the aye-aye to be *fady*. In Masoala-Makira, 37 of 57 participants (64%), whose mean age was 62 years (SD = 13), stated the aye-aye was considered *fady* to their ancestors. Of these, while 25 participants stated that their ancestors prohibited the killing of the aye-aye, 12 participants reported that their ancestors permitted it. Furthermore, five participants stated that despite being *fady,* consumption of the aye-aye was permitted amongst their ancestors. When we explicitly asked participants whether ancestors were allowed to eat the aye-aye, 45 of 57 participants (79%) answered that it was not permissible. Nine participants noted that there has been a generational shift whereby people nowadays do not respect the tradition, and therefore, the aye-aye can be consumed. One participant further explained that "some people consume it because the meat is very tasty." A total of 20 of 57 participants (35%) reported that they abide by the *fady*, although the reasons for doing so were diverse and not strictly related to a traditional *fady*. These reasons include the aye-aye is sacred (*masina*), the aye-aye [killing] is prohibited by law, the aye-aye has never been eaten by a person, the aye-aye eats insects infesting vanilla plantations, the aye-aye is evil and spirits live in it, the aye-aye is rare, the aye-aye does not reproduce much, and the aye-aye is endangered.

In Maromizaha-Vohimana, 60 of 62 participants who joined this part of the interview (97%) considered the aye-aye to be an animal that cannot be killed and 35 of 62 participants (56%) considered it *fady*. Their mean age was 49 years (SD = 15). The aye-aye could not be killed, because it cannot be eaten according to 22 of 62 participants (35%). Some participants considered the animal as both *fady* and forbidden to be killed for the following reasons: like other lemurs, the aye-aye is protected for the good of the environment; the aye-aye contributes to the regeneration of the forest; the aye-aye is rare and has to be protected; the aye-aye is part of the richness of Madagascar, and if people kill it, then "people will not know it anymore"; and the aye-aye is protected to attract tourists.

In Tsitongambarika, all (72/72) participants said the aye-aye was *fady*. A total of seven of 72 participants declared that consumption of the species was *fady*, and only two clearly stated that killing was forbidden. One participant called the animal "*fady*" and talked about a funeral for the animal, but he was very adamant that the animal should be killed when encountered.

## Perceptions of the Morphological and Spiritual Nature of the Aye-aye

### Evilness, Sacredness, and Spirits

Expressions reflecting negative perceptions of aye-ayes (Table S06) were more frequent in Masoala-Makira, where "dangerous" and *manajima* (i.e., dangerous as capable of causing accidents) were common adjectives (Masoala-Makira $n = 22/57$; Maromizaha-Vohimana $n = 1/90$) frequently rooted in a belief linking the animal to misfortune. The aye-aye was described as evil (Masoala-Makira $n = 4/57$; Maromizaha-Vohimana $n = 3/90$), ferocious (Tsitongambarika $n = 1/72$), an enemy (Masoala-Makira $n = 1/57$), a prophet of misfortune (Masoala-Makira $n = 4/57$), and a sign of danger (Masoala-Makira $n = 1/57$). Two participants mentioned that it attacks people (Masoala-Makira $n = 1/57$; Tsitongambarika $n = 1/72$). In Masoala-Makira and Maromizaha-Vohimana, some participants considered the aye-aye sacred (Masoala-Makira $n = 14/57$; Maromizaha-Vohimana $n = 4/90$), and the places where it lives have been described as sacred (Maromizaha-Vohimana $n = 6/90$) or inhabited by *djiny* (i.e., genies) (Maromizaha-Vohimana $n = 1/90$), *maiagna* (Masoala-Makira $n = 1/57$), and evil *tromba* spirits (Masoala-Makira $n = 1/57$). Participants also mentioned that the aye-aye has *djiny* spirit (*manan'djiny*, Maromizaha-Vohimana $n = 2/90$), and it is like an *angatra* (i.e., ghost, spirit), because its fur is composed of the hair of all forest animals (Maromizaha-Vohimana n = 1/90).

### Relatedness to Humans

We did not record any accounts of a belief that the aye-aye was once human in Masoala-Makira (Table S06). Only one of the 90 participants from Maromizaha-Vohimana mentioned that the ancestors considered a dead aye-aye as a dead human being; despite describing a mortuary practice, the participant did not articulate this concept as direct kinship between the lemur and humans. In Tsitongambarika, 18 of 72 participants believed that aye-ayes are related to humans: 12 participants reported that the aye-aye was a king (a*mpanjaka*) in a previous life, and six regarded it as an ancestor.

In Tsitongambarika, one of the 72 participants belonging to the ethnic group Tavaratsy explained that "the aye-aye was once the same creature as my ancestors." He explained that "in the Tavaratsy language, the word aye-aye means 'we.'" In *tantara*(s), the aye-aye was depicted either as a king's son or as a woman (see section below). Two of the 72 participants mentioned that "aye-ayes were once people"; one of the two mentioned "they have a human face."

### Position Among Animals

Four of the 57 participants in Masoala-Makira and one of the 90 participants in Maromizaha-Vohimana explained that the aye-aye is the king of all animals, because its coat is made of the hair and feathers of all animals—a description that was not given in Tsitongambarika (Table S06). Three of the 90 participants in Maromizaha-Vohimana reported that human hair is found on its body. In Maromizaha-Vohimana,

participants defined the aye-aye as the “king of lemurs” ($n = 1/90$) and the “ghost of lemurs” ($n = 2/90$).

### Skills and Supernatural Powers

In Masoala-Makira, one of the 57 participants added that “the aye-aye is a small-sized animal but nothing can beat it, not even the fossa [*Cryptoprocta ferox*] or other lemurs,” and three participants defined the lemur as an indicator of an unfortunate event or phenomenon (Table S06). According to two of the 90 participants in Maromizaha-Vohimana, the aye-aye can imitate the human voice and cough. Still in Maromizaha-Vohimana, one of the 90 participants noted that “if the aye-aye sings in the forest and a person sings the same song, it will enter this person’s house and burn it, spreading the fire inside.” One of the 90 participants in Maromizaha-Vohimana also reported that “if a person sleeping in the forest lights a fire, the aye-aye comes to put out the fire because it does not like fire,” whereas another participant stated that “it can change color.”

## Association Between Encounters and Events

### Consequences of Encounters

In all three areas, the aye-aye is believed to cause misfortune, accidents, or death, typically dependent on particular conditions (Table S05). Examples of those conditions include observing the lemur in the forest during the day or at night, seeing it twice in a day, seeing it in the village, hearing the lemur crying like a child, talking about a direct sighting while still in the forest, killing it, disturbing, and bothering it. For example, one participant in Maromizaha-Vohimana explained, “My parents told me that if you find something a bit strange in the forest [the aye-aye], you should not ask questions to your friends, you should keep this for yourself. When you arrive at your place, you can talk about it, but when you are in the forest, it is forbidden, otherwise, you will get lost.”

These scenarios are believed to trigger a broad variety of tragic events; the most common of which in all areas are death (e.g., a child, family relatives, an elder, a respected person, all villagers) and general bad luck. Reported tragic events also include accidents, getting lost in the forest, epidemics, cyclones, flooding, fire, and even the observer’s house burning down. Two participants in Masoala-Makira and four in Maromizaha-Vohimana recalled a tragic event in their family or village as a consequence of seeing or hearing an aye-aye or from talking about a direct sighting while in the forest. Tragic events included the death of a relative, the person who saw the lemur becoming sick, and burning houses in the village.

The color of the aye-aye or the movement of its tail or whole body during a sighting constitute additional conditions that may bring specific dire consequences. For example, three participants in Masoala-Makira stated that “if the tail (or the whole coat) of the aye-aye is white, an old person will die, while if its tail (or the whole coat) is black,

a child will die." Not all cases of seeing an aye-aye, however, triggered direct misfortune. One participant from Masoala-Makira explained that if the aye-aye is still when you observe it and it looks at you instead of moving, nothing bad will happen.

Killing the aye-aye may cause death or accidents according to 18 participants in Maromizaha-Vohimana and five participants in Tsitongambarika, while in Masoala-Makira, only one participant stated that it is dangerous to kill it.

### Counteractions to Avoid Consequences

In Masoala-Makira, one participant stated that "if an aye-aye comes to the village, then you must greet it by waving and saying 'Hay-hay' in a high-pitched loud voice. By doing this, the animal will leave the village." However, one of the most common practices to avoid bad luck in the area was killing it on sight. While this practice was noted by 20 participants in Masoala-Makira, with three participants further explaining that killing the aye-aye directs the misfortune/danger "back to itself" or to its body, this practice appears to be rare in Maromizaha-Vohimana and Tsitongambarika. In Maromizaha-Vohimana, one participant explained that "the aye-aye should be killed when seen during daylight." Interestingly, the only participant who referred to this practice in Tsitongambarika stated that "when you meet the aye-aye, it does not run away, but you must kill it." However, he also explained that "aye-ayes are the same creatures as the Tavaratsy ancestors," and then he described a mortuary practice bestowed upon the animal (see section below).

### Benefits from Encounters

No participants from the northeast (Masoala-Makira) remarked on any benefits from encounters with aye-aye. In Maromizaha-Vohimana, one participant stated that "if you save an aye-aye, this can bring benefits." Another participant from Maromizaha-Vohimana explained that "if a person walking in the forest gets close to the aye-aye's nest, the animal 'opens the door' of its nest and lets one leaf fall. If the leaf falls from the front side of the animal, this will bring good luck to the person, while if it falls from the backside of the nest, this will bring bad luck." Two other participants in Maromizaha-Vohimana reported a different version of this belief: "If leaves falling from the nest come from the 'pillow' on which the aye-aye lays its head, this brings good luck, but if the leaves are from where the animal had its bottom, this will bring bad luck." In Tsitongambarika, six participants reported a simplified version of the belief: "If a person finds the 'pillow' of the aye-aye, this will bring good luck."

### Tantara(s) and First-hand Accounts

We recorded three *tantara*(s) from three different participants, all from Tsitongambarika. The first *tantara* recalls a time in which, according to the story, it was customary for villagers to practice funerary anthropophagy of any village member who died. When Hay-hay, the famous son of a king, died, his father did not want the villagers to eat him and offered many zebu (*Bos indicus*, highly valued cattle and a

key indicator of social status in Madagascar) in exchange for avoiding the act. From that time, the aye-aye cannot be eaten and is treated respectfully when found dead, through the use of a white *lamba* (i.e., traditional fabric) and money. In the second *tantara*, Hay-hay was an unfaithful woman who had affairs with several men, including a married man. In retaliation, the wife of that man killed Hay-hay. Hay-hay's corpse was wrapped in a white dress, and some money was put on her body. The body was moved from village to village, heading north. In the third *tantara*, aye-ayes were once "the same creatures as the Tavaratsy ancestors," and they even spoke the same language. One day, some children saw an aye-aye and tried to kill it as they recognized it as an animal. The aye-aye became angry and said, "We now need to separate. I am taking the pillows [i.e., supposedly plant material on which it lays its head] with me because you only want them for good luck." Then, aye-ayes moved far away from villages.

We also documented six first-hand accounts of encounters with the aye-aye that were followed by harmful events (Table S08). Hearing the aye-aye in the forest and sighting it within the village were, according to participants' accounts, associated with the death of a family member, illness affecting the person who saw it, and village fires. In a detailed account, one participant explained that his brother's sighting of an aye-aye in the forest, followed by speaking about it to him while they were still in the forest (thus violating an injunction against discussing strange occurrences while in the forest) resulted, months later, in his own serious illness.

## Mortuary Practices

Our interviews revealed that the discovery of a dead aye-aye, whether resulting from accidental killing (e.g., trapping or forest clearing) or simply finding its body, was consistently understood to require ritual handling. Practices vary significantly in complexity and the stages involved. A total of 103 of 191 participants (47%) described some form of mortuary rites associated with finding a dead aye-aye (Table II), with the highest prevalence in Maromizaha-Vohimana ($n$ = 58/90; 64%), followed by Masoala-Makira ($n$ = 25/57; 44%) and Tsitongambarika ($n$ = 20/72; 28%). Three witness accounts (Table S08) suggested that those rites were practiced until no more than 60 years ago (one eyewitness was 58 years old at the time of the interview). The mean age of participants that knew of a mortuary practice was 53 years (SD = 17); 49% ($n$ = 31/63) of participants older than 60 years and 33% ($n$ = 23/69) of young participants (18–40 years) knew of a practice. Not all participants mentioned every stage and the chronological order of stages varied (Fig. S2).

### Celebration

One participant from Maromizaha-Vohimana explained that after that the aye-aye is wrapped in a white *lamba* and set on a shelf in the forest, "you have to call all the people from at least four villages, to assist the ceremony and the funeral. The ancestors consider it to be like the death of a person. The person who had seen the body

**Table II** Main themes and stages identified in mortuary practices for the aye-aye in three regions of Madagascar (2016–2020), including the number of participants who mentioned each stage. Stages and speech content differ depending on whether the aye-aye was killed or found dead. The order of stages varied and stages in the same main theme can be mutually exclusive. MS-MK = Masoala-Makira; MZ-VH = Maromizaha-Vohimana; TGK = Tsitongambarika

| Main theme | Mortuary practice stage | **Area** | ***n*** |
|---|---|---|---|
| **Celebration** | Playing *Faray* music with bamboo drums | MS-MK | 1 |
| | | MZ-VH | 3 |
| | The person who first saw the body should buy beans or dried fish for the participants to the funeral | MZ-VH | 1 |
| | Calling everyone from the village(s) | MZ-VH | 1 |
| | If there are three people, one cries and the other two dance | MZ-VH | 1 |
| | Crying | MZ-VH | 2 |
| | Sacrifice of a zebu of the same color of the aye-aye | MZ-VH | 1 |
| | *Faray* ceremony/night party/celebration: singing/drinking/dancing | MS-MK (1,2) | 3 |
| | (1) around the body<br>(2) until the morning | MZ-VH (2) | 2 |
| | Making a fire | MS-MK | 1 |
| **Speech** | The person who finds it dead gives a speech (*joro/kabary*) as for a dead person | MZ-VH | 6 |
| | The person who hanged the body in the first village gives a speech | MS-MK | 1 |
| | In the morning, the *Tangalamena* tells ancestors or *Zanahary* (God) about the death and asks for a benediction and to avoid misfortune, in presence of rice and honey without alcohol | MZ-VH | 1 |
| | The *Tangalamena*/oldest person gives a speech *(rasavolana/fitorohana)* | MS-MK | 3 |
| | | MZ-VH | 1 |

**Table** II (continued)

| Main theme | Mortuary practice stage | **Area** | ***n*** |
|---|---|---|---|
| **Body treatment before the resting place** | Bringing the body to the nearest village | TGK | 3 |
| | Keeping the body for one day | MZ-VH | 1 |
| | Wrapping the body in a<br>(1) white *lamba* (*sogabe*)<br>(2) red *lamba*<br>(3) unbleached *lamba* (*lamba soga*)<br>(4) *lamba* of any color<br>a) as for a dead person/as in a funeral<br>b) as for a dead king or a dead child | MS-MK (1;b)<br>MZ-VH (1,2,3,4;a)<br>TGK (1;a) | 6<br>53<br>19 |
| | Wrapping the body in Ravinala leaves | MZ-VH | 2 |
| | Pouring local rum (*betsa*) on the body prior to burial | MS-MK | 1 |
| | (If you want to see it) Placing money on the body prior to burial | TGK | 12 |
| | Cutting the tail off before hanging it | MS-MK | 1 |

**Table** II (continued)

| Main theme | Mortuary practice stage | **Area** | ***n*** |
|---|---|---|---|
| **Transfer and setting of the body in the resting place** | Throwing the body in the sea | MS-MK | 1 |
| | Placing the body in a clean place, safely high on a tree (1) on a wooden shelf/(2) on tree branches/(3) on an epiphyte fern (*Vombonina*) where birds nest | MZ-VH | 47 |
| | Digging a hole and burying the body<br>(1) in the forest<br>(2) where it was found dead<br>(3) in a clean place | MS-MK (2,3) | 15 |
| | | MZ-VH (1) | 7 |
| | | TGK | 3 |
| | Buying local rum (*toaka gasy*), drinking it and leaving it at the feet of the tree on which you placed the body, prior to speech | MZ-VH | 1 |
| | Placing/hanging the body (1) at a crossroads (until it degrades)/(2) at the edge of the road/(3) in a place where lots of people are able to see it | MS-MK | 9 |
| | Moving the hanged body from a crossroads to another | MS-MK | 1 |
| | Teasing the hanged body (irritating the animal, putting a cigar in its mouth) | MS-MK | 1 |
| | Moving the body from village to village<br>(1) heading north | MS-MK | 1 |
| | | TGK (1) | 15 |
| | After circulating from village to village, bringing the body back where it was killed | TGK | 1 |

first is in charge of buying beans or dried fish to feed the people you called or you gather for the funeral. All people stay awake until the morning. During this, there is a party-like ceremony called *faray*. The *Tangalamena* [i.e., spiritual authority of the Betsimisaraka village in charge of mediating between the living and the dead] arrives in place in the early morning to tell the ancestors or *Zanahary* [i.e., God] about the event and ask for a benediction in presence of rice and honey, without alcohol." Four participants from Maromizaha-Vohimana and two participants from Masoala-Makira mentioned the playing of *faray* music with bamboo percussion, whereas those attending the celebration drink, sing, and dance the night before the morning burial (Table II). One participant from Maromizaha-Vohimana explained that "if three people are joining the ceremony with *faray* music, two of them dance and one cries as they would do for a person's funeral." Another participant from Maromizaha-Vohimana mentioned that "if you find the aye-aye dead in your trap, you should sacrifice a zebu of the same color as the dead aye-aye."

## Speech

Four participants from Masoala-Makira and six from Maromizaha-Vohimana mentioned that a speech (*kabary*) or ritual invocation (*joro*) should be made in the presence of the body (Table II), a custom afforded to human burials. The speech for the aye-aye is typically, but not in all cases, given by the village elder or the *Tangalamena*. In Masoala-Makira, the speech includes "stay here with your ghost, please don't follow us to our home" or "we are burying you, bring your misfortune [or danger] with you" (Table S10). The aye-aye's cause of death dictates the type of speech. When an aye-aye is killed and hanged at a crossroads, the person responsible says, "Bring the danger with you." If the aye-aye is found dead, the person who found it pronounces "I'm not the one who killed you, I leave you in a high, clean place" or "It wasn't us that killed you, but we are celebrating the *fombafomba* [i.e., traditional rite]." If the aye-aye is found dead in a trap in Maromizaha-Vohimana, the *Tangalamena* gives a speech called *fitorohana* (i.e., Malagasy for "accusations of wrongdoing"). Another participant from Maromizaha-Vohimana stated that "if you mistakenly killed an aye-aye, you should drink *toaka gasy* [i.e., local rum], leave it at the aye-aye's feet, and say 'it was not our purpose to kill you.' This *toaka gasy* is for your consideration not to cause sickness to us." One elder from Maromizaha-Vohimana recalled the following speech given when a dead aye-aye was found in a rice field: "Here is the place where we place you, stay there comfortably. As for us, make us safe, either we are the owners of the rice field or we are the people gathering here to attend this event. Nothing is bothering us. We will never envy people but will be envied by people."

## Body Treatment

In Masoala-Makira, one participant explained that when a dead aye-aye is found, some *betsa* (i.e., locally-made rum) should be poured on the body prior to burial, whereas in Tsitongambarika, according to one participant, some money should be placed on the body (Table II). If the aye-aye was killed, in Masoala-Makira, the tail

should be cut off before hanging the body (one participant). Across all study sites, participants reported that before a dead aye-aye is placed in its final resting place, its body should be wrapped in a *lamba* (Masoala-Makira $n$ = 6/57; Maromizaha-Vohimana $n$ = 38/90; Tsitongambarika $n$ = 19/72). However, specifications on the color of the fabric varied regionally. In Masoala-Makira, one participant stated that the aye-aye should be wrapped in a white *lamba* as is done for the burial of kings or children. According to two participants from Maromizaha-Vohimana, the body should be wrapped in ravinala (*Ravenala madagascariensis*) leaves.

## Transfer and Setting in the Resting Place

Participants mentioned four main ritual destinations for the body (Table II). First, in Maromizaha-Vohimana, the body can be placed safely high in a tree, on a wooden platform, such as a shelf built for the occasion or in a forked tree branch. It should be in a clean and safe place, protected from potential predators, such as dogs or fossa (*Cryptoprocta ferox*). One participant from Maromizaha-Vohimana also said that an alternative to burial would be to place the body on an epiphyte fern (*vombonina*) where birds nest. Second, in both Masoala-Makira and Maromizaha-Vohimana, the body can be buried in an excavated hole. The burial place should be where the aye-aye was found dead or a "clean" place (i.e., not used as a toilet). Burying the aye-aye would prevent the body from being eaten by other animals and was also considered a worthy form of respect. Participants never mentioned the use of a coffin; when specifically asked, some participants made it clear that the burial is without a coffin. In Tsitongambarika, we recorded a precise procedure repeatedly: the body should be wrapped in a white *lamba* like in a funeral, brought to the nearest village, and then moved from village to village towards the north. A small amount of money (e.g., 100 to 1,000 Ariary; 0.02 to 0.22 USD) should be placed on the body when it is buried. The money will accompany the aye-aye into the afterlife. The reason for the displacement heading north is not unanimous. Several participants said that this would allow the news to spread over an extensive area. Others appeared to relate this tradition to the idea of a special burial site at the final destination. One participant specified that it takes so long to move the body toward the north that it usually decomposes, so a tomb may never be reached. Third, one participant in Masoala-Makira said that the body should be thrown in the sea, because it is "poisonous." Fourth, in Masoala-Makira the body can be hanged at a crossroads or at the roadside or just placed in a visible or crowded place so that lots of people could see it. People that see the body report its presence to other villagers to make everyone see it. In participants' explanations, these locations appeared to be associated with increased visibility of the animal. The body apparently should be left hanging until it decomposes. According to two other participants, whoever sees the body should move it to the next crossroads or from village to village to increase the number of people able to view the animal. When the body is first hanged, the person responsible gives a speech, but this is done once and not repeated each time the animal is moved to the next crossroads.

Four participants explained the need to engage in a mortuary practice even after a nonaccidental killing of the animal. One participant from Masoala-Makira stated that, after hanging the body at the edge of the road, it should be teased or irritated (e.g., putting a cigar in its mouth). This is supposed to reduce the misfortune that an aye-aye can bring to a person that has seen it. According to another participant, another option after the killing is to place the body in a clean place and organize a celebration in which people make a fire, drink, sing, and dance around the body all night and then in the morning, bury it. In some cases, practices taken after the killing do not differ from those reported in cases of accidental killing or simply finding the body, such as burial and hanging it in a visible place (Masoala-Makira). One participant from Tsitongambarika claimed that, after killing the animal, the person responsible should call everyone and bring the body to the village. The body is wrapped in a white *lamba*, some money is put on it, and it is moved from village to village towards the north. Once the body has circulated among the villages, it must come back to where it was killed.

Three participants provided explanations as to why such a body of practice is dedicated to the aye-aye. According to a participant from Maromizaha-Vohimana, the ancestors told the *Tangalamena* that the reason for the ceremony is that the aye-aye is “the king of lemurs,” and it is dangerous not to organize the ceremony for whoever has killed or seen a dead aye-aye. Another participant explained that the reason is that it is “the king of all animals.” In Tsitongambarika, the aye-aye’s body is treated respectfully, because it is considered a king’s son according to a legend. Mortuary customs may also be linked to the perception of the aye-aye as a “superior being,” either a king or another respected ancestor.

## Magic and Therapeutic Practices

In Maromizaha-Vohimana, one participant considered the aye-aye as an animal that can be used by the *ombiasy* (i.e., traditional healer) and thus cannot be killed, whereas two participants considered it as an animal that can be used for *fanafody* (i.e., traditional medicine). One participant from Masoala-Makira explained the use of aye-ayes in the context of magic and traditional medicinal practices in greater detail. The participant described the aye-aye as belonging to the same family as the *tromba* (i.e., spirit) as both are “evil.” The beard of aye-ayes, specifically their facial hair and whiskers, is used by the *tromba* (i.e., spirit or spirit medium) for *fagnekibe*, a type of magic intended to persuade others to yield to its wishes, e.g., in romantic flirting, requesting a loan, or during negotiations. The beard is also used by malefactors to avoid being caught when they do bad things: “If you have it, you will never be trapped even if you have done something illegal.” Additionally, the participant said that the aye-aye foot is used by the *tromba* (i.e., traditional healer) to heal cancer. For this participant, the aye-aye is *fady* and should not be killed. He considered it evil and thinks that it can bring bad luck.

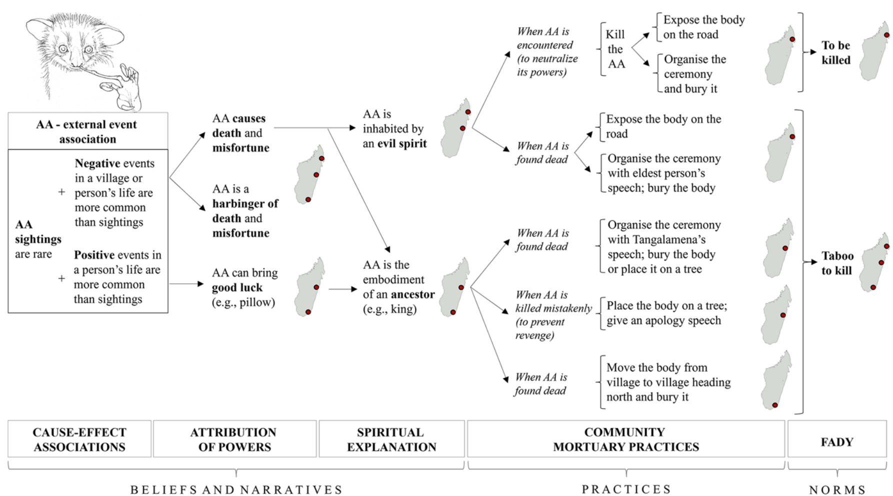


**Fig. 3** Summary of the connections between beliefs, narratives, practices, and norms related to the aye-aye across the three sites in Madagascar (2016–2020). This conceptual map offers an interpretive synthesis of shared patterns emerging from the data. The connections represented do not capture the full range of possible combinations, but rather highlight recurrent associations observed across the sample. AA = aye-aye. Aye-aye illustration by Stephen Nash.

## Discussion

Our results show that beliefs and practices surrounding aye-ayes vary considerably even within the same area, preventing any generalized characterization of regional attitudes. Nonetheless, certain patterns emerged (Fig. 3). Associations with misfortune exist in all three areas, although in Maromizaha-Vohimana and in Tsitongambarika, aye-ayes also may be linked to good fortune. Taboos against killing the species are most common in south-eastern and central-eastern sites. In Masoala-Makira and Maromizaha-Vohimana, the aye-aye is often linked to evil spirits, whereas in Maromizaha-Vohimana and Tsitongambarika it may embody an ancestor's spirit—a belief that underlies mortuary practices. These practices were most widely reported in Maromizaha-Vohimana, occur in a single form in Tsitongambarika, and follow voluntary killings only in Masoala-Makira.

### Ominous Perception and Superstition

Several participants from Masoala-Makira defined the aye-aye as *manajima*. Across Betsimisaraka communities, this term refers either to a condition of being dangerous and causing accidents (D.C. Rasamisoa, personal observation) or to the capacity for powerful acts of revenge triggered by other people's misbehavior, and it is often used to describe the spiritual power attributed to snakes and chameleons (N. Rasoanaivo, personal communication). The ominous perception of the aye-aye expressed by several participants in all sites is consistent with previous reports where the species has

been described as scary (Dolins *et al.*, 2010; Rakotomamonjy *et al.*, 2015), created by the devil (Simons & Meyers, 2001), capable of evil acts (Goodman & Schütz, 2000; Koenig, 2005; Simons & Meyers, 2001), endowed with supernatural powers (Ruud, 1960), and an omen of misfortune and death (Petter, 1977; Simons & Meyers, 2001). Although this narrative is common only for the aye-aye, other animals are also considered omens of bad luck and calamity in some areas of Madagascar, including the leaf-tailed gecko (*Uroplatus* sp.; G. Donati, personal observation), chameleons (Rasolofomboahangy, 2021), the hamerkop (*Scopus umbretta*), a lizard with two tails, and dogs or bird species displaying unusual behaviors (Sibree, 1896). As is the case with aye-aye, all these associations between animals and misfortune are connected with uncommon events, which are perceived as sinister and ominous. Among the wide variety of conditions under which the aye-aye is thought to bring misfortune, killing the animal has been anecdotally reported as a source of bad luck (Britt, 2002; Ruud, 1960; Shaw, 1882; Sibree, 1879) and provides a basis for the *fady*. While the aye-aye is widely associated with bad luck throughout the island, reports linking the species to good luck appear confined to eastern ethnic groups. The theme we recorded of the "aye-aye pillow," which can bring bad or good luck, was also described in older reports (Baron, 1882; Decary, 1950; Lamberton, 1911; Shaw, 1882; Piolet, 1895) for Betsimisaraka and Sihanaka ethnic groups (eastern Madagascar), with slight differences compared to what we recorded in Maromizaha-Vohimana and Tsitongambarika.

Some authors have proposed broad conceptualizations of superstition (Gnanaolivu *et al.*, 2022), which we define as beliefs and/or practices that lack both religious and scientific grounding, leading people to associate external facts or objects with bringing good or bad luck or serving as signs of positive or negative outcomes (Delacroix & Guillard, 2008). Importantly, in the case of aye-ayes, these associations are not merely superstitious but stem from religious beliefs: events involving the aye-aye are interpreted as manifestations of the will of spirits, rather than as random occurrences. However, this association may become superstitious when the religious explanation, such as spirits' agency, is no longer transmitted across generations, or has faded from collective memory, as possibly in the case of the "aye-aye pillow."

### The Nuanced Concept of Aye-aye Fady

Our results reveal regional variation in the aye-aye *fady*, with a particularly strong presence in Tsitongambarika and a weaker one in Masoala-Makira and Maromizaha-Vohimana. However, this distribution does not necessarily mirror the spread of the *fady* linked to traditional beliefs. As expected, the prohibition against killing aye-ayes may stem from factors beyond tradition, and in some cases spiritual and non-spiritual motivations coexist. Because the word *fady* in Malagasy can be used to identify acts that are simply breaches of good manners (Jones *et al.*, 2008; Lambek, 1992), our participants may have used this word to refer to a nontraditional *fady*. This may be connected to knowledge of national laws and antipoaching reinforcement measures or linked to conservation education efforts. The environmentally

sensitive reflections provided by some participants in Maromizaha-Vohimana lead us to believe that the conservation programs implemented by NGOs working in the two protected areas have influenced their perception of the species. In some northeastern villages, local people have been encouraged to consider the aye-aye as *fady* owing to its threatened status and conservation value (Osterhoudt, 2018). In our study, the existence of an ancestral *fady* for the aye-aye provided contradicting results. For example, in Masoala-Makira, some participants defined the aye-aye as *fady*, but it was permissible for their ancestors to kill and eat it. This apparently contradictory finding is consistent with the literature, whereby a *fady* is not intended as a killing prohibition, but rather as a body of traditions that may include killing (Albignac, 1987; Simons & Meyers, 2001). For this reason, researchers have typically identified the aye-aye *fady* as the only one harmful to a wildlife species, in contrast to most animal *fady*(s), which generally have a protective effect (Jones *et al*., 2008). Our study revealed that there is no unique, defined, or strictly traditional body of attitudes and practices that can be termed the "aye-aye *fady*." As such, inquiries into whether this species is *fady* using simple yes/no binary questionnaires will not provide an appropriate or reliable measure of its local, cultural position.

## Narrative Themes

*Tantara*(s) provide consolidation for *fady*(s) and the knowledge of a *tantara* drives higher adherence to the *fady* than those lacking a *tantara* (Golden & Comaroff, 2015a). We recorded three *tantara*(s) from the southeast with a structured narrative and stylized characters, one of which is historicized. The first *tantara* recalls a time when funereal cannibalism was practiced, possibly existing in some areas until the 19th century (Campbell, 2013). The theme and characters of this *tantara* are similar to a Merina legend representing a rite of passage recorded in the late 19th century (Decary, 1928). Although the Merina legend describes when the ritual eating of human flesh became taboo and funereal anthropophagy was substituted with the sacrifice of zebu at funerals, the Tsitongambarika *tantara* provides an explanation for the origin of the aye-aye *fady* (linking it with ancestral royalty) and related funeral practices. Similarly, the second *tantara* justifies the human-like funeral practice, depicting the aye-aye as the embodiment of a killed woman. The third *tantara* provides a kinship link between the ancestors of the local people and the animal, describing a crucial moment in which the aye-ayes changed their habit, leaving villages to populate the forests. The separation of a group of ancestors who moved into the forest and metamorphosed into lemurs is a common theme in Malagasy legends attributing a human origin to lemurs (Abinal & De la Vaissière, 1885; Decary, 1950; Ferrand, 1893).

Although *tantara*(s) of large lemurs are plentiful in Malagasy folklore (Abinal & De la Vaissière, 1885; Anania & Donati, 2024), we found no *tantara* in literature specifically linking the aye-aye to ancestral kinship. The paucity of aye-aye narratives was noticed by the late Charles Lamberton (1911), who wrote, "It is remarkable that the Betsimisaraka(s), who have introduced almost all the animals of their region into their tales, have no story about the aye-aye." The only two structured

*tantara*(s) we could find in the literature (Harpet, 2022; Ruud, 1960) both appear to function as cautionary accounts, warning of the dire consequences of the aye-aye spirit's revenge when the animal is harmed, while simultaneously providing an origin for the *fady*. We recorded six first-hand accounts that could be the basis for this kind of narrative, serving to consolidate beliefs. Accounts of calamities following an interaction with an aye-aye are common throughout Madagascar (Simons & Meyers, 2001) and confirm the perceived cause-and-effect relationship between those events (Randimbiharinirina *et al*., 2021). The need to consolidate the *fady* may have constituted a selective pressure favoring cautionary stories about avenging spirits over myths focusing on the animal-clan bond. The spread of such narratives, which held strong influence within the community, would also have reinforced community identity and promoted adherence to a crucial body of practices. Because interactions with this lemur are rare, these beliefs are likely continuously reinforced through storytelling and participation in social practices.

### Mortuary Practices and Their Similarity to Funerals

Our results indicate that mortuary practices dedicated to the aye-aye are still remembered and possibly practiced by rural communities in eastern Madagascar. They also suggest that approximately one-third of the younger generation knows about these practices. As with beliefs, we recorded considerable diversity in practices, reflecting both the variety of beliefs about the animal (which likely differ at family or clan level and underpin the practices) and the range of human funeral rites across Madagascar peoples.

Mortuary practices dedicated to the aye-aye have been reported since the late 19$^{th}$-century (Shaw, 1885). According to those accounts, the two destinations for the lemur body when found dead are burial (Jolly, 2015; Lamberton, 1911; Shaw, 1882) and placement on a raised wooden platform (Britt, 2002) across Betsimisaraka people. The latter practice is required of a trapper if an aye-aye dies in his snare; otherwise, the *tsiny* evil spirit, to which the aye-aye belongs, will kill the culprit (Britt, 2002). The use of a white *lamba* as a shroud has also been previously reported (Andriamasimanana, 1994; Britt, 2002). Additionally, in some areas of the northeast and east, rituals and burial follow the killing (Andriamasimanana 1994; Jolly 2015) and involve several hours of public display (Petter, 1977). In one account by the late Alison Jolly (2015), a killed aye-aye, wrapped in funeral fabric and desiccating, was transported from village to village throughout the south until it finally reached a village where it was buried. This practice bears similarities to the one we recorded at Tsitongambarika, with the exception that the animal was killed in Jolly's account.

Ceremonies performed when the aye-aye is found dead have not been previously described in detail. Previous scholars only mentioned that they are similar to those bestowed upon a great chieftain (Lamberton, 1911; Shaw, 1882; Sterling & Feistner, 2000). Accounts from the literature report that in those areas in eastern and northwestern Madagascar where aye-ayes are killed, specific rituals are performed to remove any ill effects before eating them (Simons & Meyers, 2001). For example, in a village from the east, killed aye-ayes are brought to the village where all

the children gather around the body and are obliged to cry. This practice neutralizes a sort of "radiation" spreading from the animal skin, allowing its meat to be eaten (Simon & Meyers, 2001). In the northeast, the ill-fortune associated with the aye-aye can be "expelled" with magical songs performed at the corners of the village (Simon & Meyers, 2001). This practice allows for the consumption of the animal, e.g., at weddings or other festive occasions (Simon & Meyers, 2001). Another practice recorded in Ranomafana in the southeast holds that if an aye-aye is found dead, it is forbidden to bury it, and its wrapped body must be moved from village to village until it reaches the sea (A. Anania, unpublished data). In other areas, to ward off misfortune after encountering and killing an aye-aye near one's home, the animal's body is placed in a neighbor's back garden. This act sets off a ritualized chain of transfers from one household to another throughout the village, ultimately ending with the corpse being discarded onto the road (Durrell, 1992).

In both the literature and our study, several stages of mortuary rites performed for aye-ayes correspond to rites practiced by some Malagasy ethnic groups for human burials. In all Malagasy funerals, the body is wrapped in one or more *lamba*(s) (Decary, 1951). Merina people once left coins in their tombs (Grandidier, 1932) and for some Merina and Betsimisaraka, it was customary to put a gold coin into the dead person's mouth "to open the way to heaven" and to allow the *angatra* spirit be admitted before God (Grandidier, 1932). On the first day after the death of a Betsimisaraka person, speeches are given, rice is pounded and cooked, and zebu are sacrificed for a banquet. Ritual wakes include dances and religious songs (Chavanes, 1969). In Betsimisaraka ceremonies, musicians can play *faray* music (Rajemisa, 1985), and after burial, the *Tangalamena* normally asks the spirit of the deceased to stay quiet in the tomb and not to terrorize the living (Chavanes, 1969). Merina people may even hire mourners to increase the solemnity of the funeral (Grandidier, 1932). In Madagascar, the body of the deceased can be left to dry out or buried (Decary, 1951). The burial of the aye-aye in an excavated pit has similarities to the burial of many ethnic groups, but the use of a raised wooden platform has not been recorded in Malagasy funerals to our knowledge.

Similar to Malagasy funerals for community members, mortuary practices for the aye-aye are principally respectful practices. This is confirmed by participants who stated that the place where the animal was to be buried or laid to rest had to be clean and sheltered from predators. We found no reference to the use of a coffin for aye-ayes in our interviews, unlike human funerals among the Betsimisaraka people, where coffins are customary (Chavanes, 1969), and consistent with southeastern ethnic groups, where they are not used (Decary, 1951). Mortuary practices for the aye-aye may also take place after the animal has been killed. This is the case of practices such as burial and funeral celebration (data from Masoala-Makira in this study; Andriamasimanana, 1994; Petter, 1977) and the transport of the body from village to village (data from Tsitongambarika in this study).

Mortuary practices are also conducted for other animals in Madagascar. Some Malagasy once bestowed zebu and kestrels (*Falco newtoni*) with a *lamba* for burial (Ruud, 1960; Sibree, 1896), while the Zafindravoay clan afforded a human-like funeral to Nile crocodiles (*Crocodilus niloticus*; Sibree, 1879). Across some eastern communities, the indri commands a respectful ritual (Smith, 1886; Vinson, 1863) in

which the dead body is wrapped in a shroud made of leaves and buried. Then people offer tears, laments, sobs, and songs to the lemur (Abinal & La Vaissière, 1885). In the south, the Tandroy people were once known to give Verreaux's sifaka a dignified burial, covering the tomb with stones and leaves (Grandidier, 1868). Taken as a whole, these respectful practices bestowed to some species confirm the traditional interconnection between the Malagasy people and the natural elements within their spiritual system.

### Magic and Therapeutic Practices

We report the use of aye-aye hair and feet by healers or shamans in Maromizaha-Vohimana and Masoala-Makira for therapeutic and magical practices. To our knowledge, the only previous account concerns the aye-aye's elongated third finger, which in some areas was dried and used by village sorcerers as a magic charm (Durrell, 1992). A comparable practice has been documented in southern Madagascar, where a protective charm against fatigue was made from the foot bones of putative Verreaux's sifakas (Decary, 1950), a species regarded as *fady* in some regions (Harpet, 2011). Together, these examples suggest that *fady* species are often believed to hold spiritual power, which can be harnessed in the making of charms.

### The Perceived Nature of the Aye-aye

The aye-aye elicited opposing beliefs and practices and triggered strong feelings such as ominous fear and reverence in our participants. Our results confirmed that the aye-aye's place in a community's customs goes beyond the natural resource domain in Malagasy culture. By integrating our data with the available literature, we propose two representations reflecting the aye-aye's metaphysical nature, both related to the spiritual possession of the animal, whether by ancestors' or evil spirits (Fig. 3).

In the first representation, the aye-aye has spiritual or kinship connections with humans. It is described as the embodiment of the ancestors of a given ethnic group (Betsimisaraka: Shaw, 1882) or an ancestor transformed in animal form (Lamberton, 1911). Legends and beliefs from Tsitongambarika state that the aye-aye was once a person or even a king's son. One legend suggests that aye-ayes are of the same nature as ancestors, but in animal form. Consequently, when an aye-aye dies, it is given a funeral worthy of a person, a child, or a chieftain/king (Sterling & Feistner, 2000). As in the case of other lemurs (Anania *et al.*, 2018; Jones *et al.*, 2008), the belief that the animal harbors an ancestor's spirit constitutes a basis for the *fady*, particularly in Tsitongambarika.

Several animal species are considered embodiments of Malagasy forefathers. For instance, ancestors may live on as a crocodile (Allibert, 2008), snake (Vig, 2003), or lemur (Shaw 1882; Jones *et al.*, 2008). In the latter case, folklore often depicts ancestors metamorphosing into lemurs, a motif commonly linked to the shift from village to forest life or to a reluctance to work and clear the forest (Anania *et al.*, 2018; Decary, 1950; Ferrand, 1893). Although Lamberton (1911) interpreted the Betsimisaraka belief about the aye-aye as a transformation of ancestors, we found

no clear mention of transformation in the *tantara*(s) from Tsitongambarika. However, the third legend suggests a turning point in which the animals, feeling in danger, leave the village, resulting in a separation between the animals and the community from which the clan descends. That theme is similar to other lemur legends, such as those involving indri (Abinal & De la Vaissière, 1885) and Verreaux's sifaka (Harpet, 2011), which explicitly include a metamorphosis of ancestors into lemurs, unlike the Tsitongambarika accounts. Collecting accounts from Betsimisaraka, Shaw (1882) reported on a dead ancestor that developed inside an aye-aye, and for this reason, the animal was found inside the tomb where the ancestor was buried, a link that some Malagasy described also for snakes living close to tombs (Sonnerat, 1806). As pointed out by van Gennep (1904), across animal legends, animals may also be represented as the (nonsymbolic) reincarnation of a human being, explained as true metempsychosis. This may be the case for the aye-aye (Glaw *et al*., 2008; Sterling & Feistner, 2000), and our results seem to be in line with this explanation. Following this interpretation, the ancestors' spirits would have reincarnated in the "animal aye-aye" after their death, while the mortuary practice bestowed upon the aye-aye would be a ritual memorization of the leaving of the host body linked to metempsychosis.

Being of the same spiritual matter as the ancestors likely makes the aye-aye sacred or "an object of veneration" (Owen, 1863). Malagasy traditional religion is centered on reverence and respect for the ancestors (Lambek, 2016; Sharp, 1994). Objects or places (e.g., forests) strongly associated with the ancestors may be considered sacred (Andriamarovololona & Jones, 2012) and may relate to *fady*(s) established by ancestors themselves. Other animals, such as the radiated tortoise *Astrochelys radiata* (Juvik, 1975), Nile crocodile *Crocodylus niloticus* (Andriamarovololona & Jones, 2012), and the black lemur *Eulemur macaco* (Harpet *et al*., 2000), are also referred to by locals as sacred, while interactions with a considerable number of animal species are constrained by *fady* throughout the island.

In the second representation, the aye-aye is an incarnation of evil spirits (Iwano, 1991). Britt (2002) reported another Betsimisaraka belief according to which the aye-aye belongs to an evil spirit, the "*tsiny*," which would avenge the animal if it were killed unless a mortuary ritual is performed to appease the spirit (refer to Table S04 for a glossary of Malagasy terms). Our participants called the aye-aye "*angatra*"-like and described it as belonging to the same family as the *tromba* evil spirits. Participants also stated that the aye-aye lives in places where there are "*djiny*," and that the aye-aye itself has "*djiny*." In Malagasy traditional religion, *tsiny* or *djiny* is a "class" of spirits that can be good or evil and correspond to Arabic genies (Jaovelo-Dzao, 1996). Communities living close to Masoala and Makira consider *tsiny* only evil, although a minority of them do not actively harm people; according to their belief, *tsiny* spirits live in the forest and can take a human host and kill it slowly (Golden 2014). For instance, some Malagasy consider *Brookesia* chameleons to be associated with wood-genies (*tsiny*), attributing evil deeds to them (Ramanantsoa, 1984). The term *tromba* can indicate the spirit possessing a body (Jaovelo-Dzao, 1996) while *angatra* can be translated as spirit or ghost (Radimilahy, 1994; Richardson, 1885). According to Rajemisa (1985), the *angatra* is a manifestation of the spirit of the dead, even animals, hovering/grieving around the living, who may even see it. In Masoala-Makira, *angatra* are ancestral spirits frightening people like ghosts and can be

angered like people. They can be good or evil, and people cannot communicate with them (Golden, 2014). Spirits, such as *angatra* and the ancestors' spirits, animate everything found on earth (Radimilahy, 1994). A site can be considered sacred when it is inhabited by *angatra* spirits or by the ancestors' spirits (Radimilahy, 1994), and sacredness could be extended to an animal inhabited by these spirits.

Animals also have spirits capable of avenging them (Ramanantsoa, 1984), which would explain why the cited spirits use their powers against people when the aye-aye is captured or harmed. When the spirit possessing the aye-aye is disturbed or a *fady* is broken, several practices are implemented to appease the spirit, neutralize its powers, make it go away, and protect the community. These include killing the animal and displaying it outside the village (Glaw *et al*., 2008; Koenig, 2005), using a charm (Piolet, 1895; Shaw, 1882), smearing grease on the animal and setting it free (Baron, 1882; Decary, 1950; Lamberton, 1911), funeral-like practices (Britt, 2002), or the use of magical songs or crying children (Simons & Meyers, 2001). In some cases, performing a ritual provides spiritual immunity, removes the *fady*, and allows people to eat the body, freed from the dangerous spirit (Simons & Meyers, 2001).

Not all rural Malagasy people attribute spiritual significance to the aye-aye (Fig. S3). Throughout Madagascar, for instance, some farmers kill the aye-aye, because it is believed to damage crops (Albignac, 1987; Lee & Priston, 2005; Osterhoudt, 2018; Simons & Meyers, 2001) and prey on domestic poultry (Andriamasimanana, 1994; Goodman & Schütz, 2000). The aye-aye is a hunting target for some people in Makira (Golden, 2009; Golden & Comaroff, 2015a). Others around Makira have a positive perception of the aye-aye as a pest controller as it eats larvae from clove trees (Randimbiharinirina *et al*., 2021; Rabemananjara *et al*., 2025).

From a cultural and conservation point of view, the belief-driven killing of the aye-aye finds two analogues in Madagascar. According to some people, snakes called "*mandopotsy*" are inhabited by the spirits of sorcerers who can cause misfortune, suffering, and death, and who for this reason, when they are sighted, are immediately killed (Vig, 2003). In several areas, owls are hunted, because they are considered spirit birds employed by witches (Arsene & Shan, 2025).

Our findings suggest parallels with other alloprimates, namely the howler monkeys. In some regions, Panamanian night monkeys (*Aotus zonalis*) in Panama (Wolovich *et al*., 2024), black and gold howler monkeys (*Alouatta caraya*) in Paraguay (Alesci *et al*., 2022), and supposedly Colombian red howler monkeys (*Alouatta seniculus*) in Colombia (Reichel-Dolmatoff, 1971) are considered evil omens or bringers of bad luck. For similar reasons, and as in the case of the aye-aye, mantled howlers (*Alouatta palliata*) in Costa Rica (Gonzalez-Kirchner & Sainz De La Maza, 1998) are sometimes shot when found near the village. A systematic study could further elucidate similarities and differences in the traditions associated with these species by examining morphological, behavioral, psychological, and cultural factors, and comparing these with the drivers of aye-aye beliefs.

### Educational Pathways to Conservation

Our data also revealed conservation- and ecotourism-oriented perceptions in Maromizaha-Vohimana, where NGOs and researchers are active and most participants considered the aye-aye a species that should not be killed. This widespread respect for the species suggests that educational programs could effectively reinforce these conservation-minded attitudes over the long term. Existing programs (Dolins *et al*., 2010; Maminirina *et al*., 2006; Morley, 2019; Rakotomamonjy *et al*., 2015) have shown promising results, and future initiatives should portray the aye-aye as a unique, harmless animal with traits that encourage empathy, such as parental behavior and ecological roles in pest control and forest regeneration (Randimbiharinirina *et al*., 2021; Steffens *et al*., 2022). Education programs could foster a change in attitude by emphasizing the aye-aye's sentience, individuality (Kalof *et al*., 2015), and ecological role. Even low-intensity actions (Williams *et al*., 2021) can reduce negative perceptions of culturally stigmatized wildlife. These should be grounded in learners' direct observations, existing perceptions, and naturalistic knowledge and could be implemented through the use of educational short films (Leeds *et al*., 2017), animal portraiture (Kalof *et al*., 2015; Whitley *et al*., 2021), classroom talks and activities (Rakotomamonjy *et al*., 2015), serious games (Tan & Nurul-Asna, 2023), comics and storybooks (Dolins *et al*., 2010; Maminirina *et al*., 2006), and teacher training in environmental education (Balestri *et al*., 2017). Addressing misconceptions about aye-aye biology and behavior and discussing those characteristics that elicit fear and uneasiness (Catapani *et al*., 2024) could promote different knowledge and different emotional perception of this species. In the longstanding debate over how to effectively engage with cultural contexts in conservation efforts (Buschman, 2022; Infield *et al*., 2018; Wehi & Lord, 2017), a viable path may lie in fostering knowledge, empathy, and fear management among local communities, without delegitimizing traditional representations, while promoting a deeper understanding of local religious systems and cultural specificities among conservation practitioners (Dickman *et al*., 2015; Holmes *et al*., 2018).

## Conclusions

The distribution of representations of the aye-aye as "good, evil, or both" (Sterling & Feistner, 2000) remains complex and unresolved, underscoring the need to move beyond binary framings toward more nuanced questions. A schematic, Manichean view of the aye-aye (or other distinctive animals) as either sacred or demonic, depending on the community, should be approached with caution and ultimately overcome. Indeed, all documented representations of the aye-aye suggest its possession by spirits that inhabit nature and form part of the traditional religious system. As Madagascar's flagship species and conservation icons, lemurs have acquired recent "political" significance in Malagasy culture (Anania & Donati, 2024). This significance places great responsibility on scientists in evaluating and communicating people's attitudes towards animals and on conservation managers tasked with creating a synergy of intent with local communities. In Madagascar, traditional

*fady*(s) play a role in controlling hunting of protected and threatened species (Rabearivony *et al*., 2008) and likely contribute to protecting aye-ayes where they are feared and respected as ancestors. However, the wide variety of traditions and the decline of traditional rules (as indicated in some interview conversations) pose a conservation challenge, and some actions may jeopardize conservation programs. Introducing conservation bans proposed as *fady*(s) (as seen in the northeast; Sodikoff, 2012; Osterhoudt, 2018) or selectively choosing cultural aspects to support based on conservation goals (Ntiamoa-Baidu, 2008) could conflict with animistic beliefs (Neumann, 1998; West, 2006). This may lead to conflicting goals between locals and foreigners (Igoe & Brockington, 2007), perceptions of park policies as intruding into community resource management (Baird & Leslie, 2013; West & Brockington, 2006), and ultimately, protection failures. We also caution against introducing beliefs in communities where they do not exist and where the aye-aye is perceived differently. Reinforcing the belief that killing or approaching the aye-aye brings bad luck through stories of vengeful demons is unethical and would only strengthen fear and avoidance rather than knowledge of the species. Legends with "positive or neutral" content should be taken seriously but not reinforced. Challenging misfortune-associated beliefs with a rational approach, such as demonstrating that some people have had contact with the aye-aye without negative consequences, is likely ineffective, because in some areas it is believed that a few people possess a charm or know a secret that allows them to counteract the evil powers of this species (Shaw, 1882; Decary, 1950). Moreover, mentioning customary beliefs may inadvertently reinforce them and increase the likelihood of their further assimilation (Catapani *et al*., 2024). Following recent calls and discussions from conservation biologists and cultural anthropologists (Golden, 2014; Keller, 2008; 2009; Osterhoudt, 2018; Sodikoff, 2012), we propose greater caution in dealing with cultural matters concerning this species and using them instrumentally without considering the traditional religious system in which these animals have a distinctive place.

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## Declarations

**Inclusion and Diversity Statement** The author list includes contributors from the country where the research was conducted, who participated in data collection and interpretation of the findings.

**Conflict of Interest** The authors declare no conflict of interest.

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