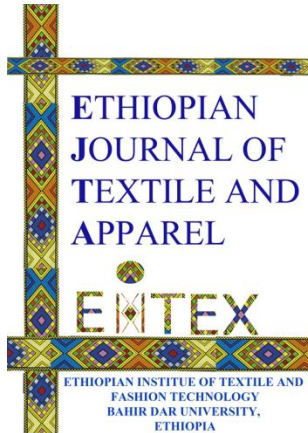




PHOTOGRAPHIC DOCUMENTATION AND MOTIF EXTRACTION OF KÒKÒRÒ (INSECTS) IN YORÙBÁLAND FOR CONTEMPORARY DESIGN APPLICATIONS

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ABSTRACT

This study explores the photographic documentation and motif extraction of Kòkòrò (insects) indigenous to Yorùbáland as a strategy for developing culturally grounded motifs for contemporary design applications. Anchored in Yorùbá indigenous knowledge systems, the research adopts a practice-based design methodology that integrates field photography, visual analysis, and studio experimentation. Selected insect species were identified and photographed across different ecological and cultural contexts within Yorùbáland, with emphasis on their form, texture, symmetry, and symbolic associations. The photographic images were analytically translated into stylised motifs through processes of abstraction, simplification, repetition, and recomposition. These extracted motifs were subsequently adapted and tested in selected design applications, demonstrating their functional and aesthetic viability. Findings reveal that Kòkòrò (insects) possess rich visual and symbolic potentials that can be effectively transformed into contemporary motifs without eroding their cultural essence. The study contributes to design scholarship by documenting an indigenous visual resource, proposing a systematic motif-extraction framework, and expanding the discourse on nature-inspired design within African contexts. It further underscores the relevance of practice-based research in bridging indigenous knowledge, visual documentation, and contemporary industrial design practice.

Keywords: Aesthetic viability, Indigenous knowledge, *Kokoro*, Motif-extraction, Visual documentation, Yorubaland

1. INTRODUCTION

Motifs derived from natural forms and cultural artefacts have long served as foundational sources for visual expression in art and design, influencing aesthetics, symbolism, and cultural identity across diverse societies [13]. In West Africa, the Yorùbá cultural domain is particularly rich in indigenous visual vocabularies where motifs are often inspired by flora, fauna, and the broader environment. Traditional Yorùbá textile systems such as *Adire* and *Aso Olona* incorporate a wide range of

symbolic forms drawn from everyday life, including animal and insect-derived pictograms, which communicate cultural narratives and meanings across generations. Historically, the derivation of motifs from the natural world, including animals and insects, reflects both aesthetic preferences and nuanced symbolic systems embedded in cultural practices.

Despite substantial research on organic and geometric traditional patterns in Nigerian textiles [2], [3], there remains a relative paucity of systematic studies focusing specifically on the visual potential of

Kòkòrò (insects) as primary sources for motif extraction within Yorùbáland. In contrast, broader pattern studies in global contexts reveal how visual elements from small fauna such as insects have been used symbolically and ornamentally in textile and craft traditions, indicating the significance of entomological forms in pattern design. Moreover, contemporary design research increasingly values nature-inspired processes such as biomimicry and abstraction for sustainable and culturally resonant visual solutions.

By foregrounding the photographic documentation of *Kòkòrò* (insects) and their translation into design motifs, this study seeks to address gaps in the scholarship while contributing a structured visual methodology for motif extraction that bridges indigenous knowledge systems and contemporary design practice. This approach not only enriches the visual language available to designers in Yorùbáland but also positions insect-derived forms as vital contributors to culturally grounded visual innovation in industrial and textile design [4].

Despite the rich visual and symbolic heritage embedded in Yorùbá textile and design traditions, there is a notable gap in systematic research focused specifically on the use of *Kòkòrò* (insects) as primary sources for motif development. While existing studies extensively explore traditional motifs inspired by plants, animals, and geometric forms within Yorùbá culture [5],[2], the potential of insect forms has been relatively underexplored. This oversight limits the expansion and innovation of culturally rooted motifs in contemporary design practice, particularly within the industrial and textile design sectors.

Moreover, the absence of a rigorous photographic documentation process and

methodological framework for extracting motifs from insects results in a loss of indigenous knowledge and visual resources that could otherwise contribute to sustainable design and cultural preservation [7]. Given the increasing interest in biomimicry and nature-inspired design, failing to utilise *Kòkòrò* (insects) as motif sources not only represents a missed opportunity for creative innovation but also undermines the richness of Yorùbá cultural expressions in modern design contexts.

Therefore, this study aims to fill these gaps by providing a structured approach to photographing and extracting motifs from *Kòkòrò* (insects) in Yorùbáland, thereby facilitating the integration of indigenous visual elements into contemporary design and reinforcing cultural identity through sustainable design practices. The study aim is the Photographic Documentation and Motif Extraction of *Kòkòrò* (Insects) in Yorùbáland for Contemporary Design Applications, while the main objective of this study is to document *Kòkòrò* (insects) indigenous to Yorùbáland through photography and systematically extract design motifs from them for application in contemporary design practice.

The specific objectives are: to identify and photograph selected *Kòkòrò* (insects) found within Yorùbáland, considering their ecological and cultural contexts, to analyse the visual characteristics of the photographed *Kòkòrò*, (insects) including form, texture, pattern, symmetry, and structural details relevant to motif development, to develop stylised motifs from the photographed *Kòkòrò* (insects) through processes of abstraction, simplification, and recomposition, to adapt and apply the extracted motifs to selected contemporary design outputs in order to assess their aesthetic and functional suitability

Indigenous motifs have long served as vital sources of aesthetic and cultural meaning in design, yet research shows that contemporary explorations tend to foreground plants and geometric symbols while under-utilising biological imagery from smaller fauna such as insects [7]. Nature-inspired and biomimetic design research has demonstrated the potential of photographic documentation to reveal intricate structural and colour features of biological subjects that can be abstracted into innovative patterns and motifs for textiles and other visual applications [7]. However, there remains a notable gap in scholarship that specifically investigates *Kòkòrò* (insects) within the context of West African cultural environments as sources for motif extraction and design transformation.

Moreover, indigenous West African design traditions have been documented as rich repositories of visual patterns and symbols that carry deep cultural meanings, yet studies often focus on well-established motifs rather than experimental visual sources. Yorùbá textile arts such as *Adire* exemplify how cultural symbols are historically integrated into visual systems, suggesting that less explored biological forms like insects could similarly enrich contemporary design vocabularies while preserving cultural identity. By developing a systematic approach to photographing *Kòkòrò* (insects) and extracting design motifs, this study addresses these gaps and contributes to expanding the visual repertoire available to designers, integrating indigenous knowledge with contemporary practice, and advancing research on sustainable and culturally grounded design innovation.

This study is significant to design scholarship, cultural studies, and creative practice in several important ways. First, it contributes to the documentation and preservation of Yorùbá indigenous visual

knowledge by systematically recording *Kòkòrò* (insects) through photographic means. In an era where indigenous ecological and cultural resources are increasingly threatened by urbanisation and environmental change, this documentation serves as a valuable visual archive for future research and creative exploration. Second, the study advances design research by proposing a structured, practice-based framework for motif extraction from natural forms. By translating photographed *Kòkòrò* (insects) into stylised motifs, the research demonstrates how biological forms can be analytically transformed into functional and aesthetically relevant design elements.

This contribution is particularly important for industrial and textile design disciplines, where the need for culturally grounded yet innovative visual resources continue to grow. Third, the study expands contemporary African design vocabularies by foregrounding insects an often-overlooked visual resource as viable sources of inspiration. While plants and geometric symbols dominate existing motif studies, this research broadens the scope of nature-inspired design within African contexts, encouraging designers to engage more deeply with local ecosystems and indigenous knowledge systems.

Additionally, the findings of this study are significant for design education and professional practice. The motif extraction process outlined in the research can serve as a pedagogical model for students and practitioners interested in integrating photography, indigenous knowledge, and creative experimentation into design development. This approach supports sustainable and context-sensitive design practices that align with global discourses on biomimicry and cultural sustainability. Finally, the study holds cultural and socio-economic significance by reinforcing Yorùbá cultural identity through

contemporary visual expression. By adapting *Kòkòrò*-inspired motifs for modern design applications, the research bridges tradition and innovation, positioning indigenous visual resources as active contributors to contemporary creative industries and cultural economies.

This study is limited to the photographic documentation and motif extraction of selected *Kòkòrò* (insects) indigenous to Yorùbáland in southwestern Nigeria. The research focuses on insects that are commonly found and culturally familiar within the Yorùbá ecological environment, selected based on their visual characteristics such as form, texture, symmetry, and pattern relevance for motif development. Geographically, the study is confined to selected locations within Yorùbáland, and does not extend to other ethnic or ecological regions in Nigeria. Methodologically, the study adopts a practice-based design approach that includes field photography, visual analysis, and studio-based motif development through abstraction, simplification, repetition, and recomposition. While the insects are photographed for visual and design analysis, the study does not engage in biological or taxonomic classification beyond basic identification necessary for design interpretation.

In terms of application, the study limits the use of extracted motifs to selected contemporary design outputs intended to demonstrate aesthetic and functional viability. It does not extend to mass production, commercial market testing, or consumer perception studies. Additionally, while the cultural meanings of *Kòkòrò* (insects) are acknowledged where relevant, the study does not provide an exhaustive ethnographic or symbolic analysis of all insect-related beliefs within Yorùbá culture. Overall, the scope is defined to ensure depth and methodological clarity, focusing on

design innovation, cultural relevance, and visual documentation rather than biological science or large-scale industrial implementation.

This study not only documents *Kòkòrò* (insects) as visual subjects but also critically positions them as underutilised design resources within indigenous knowledge systems. By systematically translating biological forms into design motifs, the research contributes to the growing discourse on biomimetic and culturally grounded design practices. Furthermore, it establishes a bridge between traditional ecological knowledge and contemporary design innovation, thereby reinforcing the relevance of indigenous visual resources in addressing modern creative challenges.

Literature Review

The use of motifs derived from cultural symbols and natural forms has long been central to visual design practices across Africa and beyond. In the Yorùbá context, traditional textile arts such as *Adire* and *Aso Olona* exemplify how indigenous motifs are embedded with cultural meaning and aesthetic depth. *Adire* symbols, for example, often represent nature, proverbs, and life aspirations, conveying layered cultural narratives through surface pattern [14]. These motifs have been explored not only for their aesthetic qualities but also for their socio-cultural significance, demonstrating the close relationship between visual design and community identity [3].

Recent scholarship on the adaptation and evolution of traditional motifs underscores the potential for such visual resources to inform contemporary design innovation. Studies on *Adire* motif adaptation reveal processes of reconstructing and transforming traditional patterns into new design forms that align with modern fashion and sustainability trends [15]. Similarly, research

into broader West African indigenous design patterns shows how local motifs can be reinterpreted and applied in contemporary textile production, reinforcing the value of cultural heritage in design innovation [8]. These works highlight a growing interest in bridging traditional motifs with contemporary design applications, yet they predominantly focus on plant, geometric, or culturally established symbols rather than less-explored biological forms.

While existing studies have extensively examined plant-based and geometric motifs within African textile traditions, there is limited scholarly attention given to insects as primary sources of visual inspiration. This gap is significant because insects inherently possess complex structural characteristics such as segmentation, radial symmetry, and repetitive patterning, which are highly compatible with motif development processes. Therefore, this study advances the literature by introducing a novel focus on insect morphology as a viable and culturally meaningful design resource.

Design research increasingly recognises nature-inspired approaches such as biomimicry and photographic documentation as valuable tools for motif development. For example, biomimicry has been applied in textile design to derive patterns from biological subjects, such as botanical imagery, through photographic analysis and pattern abstraction [7]. This work demonstrates that photography can serve as both documentation and analytical medium, facilitating deep engagement with natural forms and enabling the creation of innovative, ecologically grounded patterns. Despite this progress, there is limited research that systematically applies such methodologies to insects as primary sources for design motifs, particularly within West African indigenous contexts.

In addition to nature-inspired design research, literature on African cultural design emphasises the importance of preserving and revitalising indigenous visual languages. Studies on African textile prints and biomimetic concepts have argued for the integration of natural themes into surface design to foster sustainability and cultural pride [3]. However, few have specifically examined *Kòkòrò* (insects) as motif resources, even though insects inherently possess rich formal elements symmetry, texture, repetition that are valuable for abstract pattern development. Moreover, historical and cultural practices suggest that biological forms have been used symbolically in Yorùbá art and proverbs, indicating untapped potential for design research [11].

Collectively, the reviewed literature establishes the cultural significance of indigenous motifs and the methodological promise of nature-inspired design. Yet, it reveals a gap regarding systematic photographic documentation and motif extraction from insects within Yorùbáland. This research aims to address this gap by developing a structured approach that integrates indigenous knowledge with contemporary design processes, thereby expanding the repertoire of culturally grounded motifs for contemporary applications.

Materials and Methods

Research Design

This study adopts a practice-based design research approach, which integrates empirical documentation with creative experimentation to generate knowledge through making and visual analysis. Practice-based research is widely recognised in art and design disciplines as an

appropriate methodology for investigating culturally grounded and nature-inspired design processes [10], [7]. The approach allows for systematic exploration of natural forms and their translation into contemporary design motifs while maintaining cultural relevance.

The materials used in this study were selected to support photographic documentation, visual analysis, and motif development. Photographic materials included a digital single-lens reflex (DSLR) camera equipped with a macro lens to capture detailed images of selected *Kòkòrò* (insects). Macro photography was essential for revealing fine structural features such as segmentation, texture, symmetry, and surface patterns, which are critical for motif extraction from biological forms [4]. Additional equipment included a tripod, portable LED lighting, and neutral background materials to ensure image clarity and consistency.

Field documentation materials comprised sketchbooks, field notebooks, and writing tools used to record observational notes, environmental contexts, and reflective insights during the documentation process. These materials supported visual thinking and reflective practice, which are core elements of practice-based research [9]. For motif development, both manual and digital materials were employed. Manual tools included pencils, markers, tracing paper, and drawing sheets for preliminary sketching and abstraction. Digital tools included graphic design software such as Adobe Illustrator and Adobe Photoshop, which facilitated motif refinement, repetition, scaling, and recomposition. Digital design tools are widely used in contemporary motif development due to their precision and adaptability [1].

The methods used for the study according to the objectives are as follows:

Photographic Documentation

Selected *Kòkòrò* (insects) indigenous to Yorùbáland were photographed in situ and, where necessary, under controlled conditions. Photography focused on capturing multiple viewpoints to highlight form, texture, and pattern. Ethical considerations were observed by ensuring minimal handling and non-destructive interaction with the insects. Photography served not only as a means of visual record but also as an analytical tool for studying biological forms in detail [4].

Visual Analysis

The photographic images were subjected to visual analysis to identify key formal elements relevant to motif development. These elements included line quality, shape, rhythm, symmetry, repetition, and surface texture. Visual analysis is a recognised method in design research for interpreting images and extracting meaningful visual components for creative transformation [12].

Motif Extraction and Stylisation

Motif extraction involved translating selected visual elements from the photographs into simplified and stylised forms through sketching and digital manipulation. Processes such as abstraction, simplification, repetition, and recomposition were employed to generate motifs that retained the essence of the original insect forms while achieving contemporary visual expression. This process aligns with established methods in nature-inspired and biomimetic design research [11].

Application and Evaluation

The extracted motifs were applied to selected contemporary design outputs to assess their aesthetic coherence and functional adaptability. Evaluation was conducted through visual appraisal, focusing on clarity, balance, scalability, and cultural

relevance. While the study did not involve large-scale production or consumer testing, visual evaluation is considered appropriate for exploratory and practice-based design studies [10].

Results and Discussion

Photographic Documentation of *Kòkòrò* (Insects)

The photographic documentation process revealed that selected *Kòkòrò* (insects) found in Yorùbáland possess distinct visual characteristics that are highly suitable for motif development as shown in Fig. 1-16. High-resolution macro photography successfully captured intricate details such as segmented body structures, bilateral symmetry, surface textures, and repetitive linear patterns. These visual attributes are

consistent with findings in nature-inspired design research, which emphasise the importance of close-range photographic documentation in revealing hidden formal qualities of biological forms [4], [11].

The photographs also demonstrated variations in form and texture across insect species, ranging from smooth and reflective surfaces to ridged and patterned exoskeletons. These variations provided a rich visual database that supported multiple approaches to abstraction and stylisation. The use of neutral backgrounds and controlled lighting enhanced clarity and allowed the insects' formal elements to be isolated for design analysis, reinforcing photography as both a documentation and analytical tool in design research [10].



Fig. 1: Butterfly
(Labalaba)



Fig. 2: Ant
(Eera)



Fig. 3: Grasshopper
(Tata)



Fig. 4: Housefly
(Eshinshin)



Fig. 5: Dragonfly
(Lamilami)



Fig. 6: LadyBug
(Kokoro Ladiboogi)



Fig. 7: Cockroach
(Ayan)



Fig. 8: Millipede
(Okun)



Fig. 9: Black Ant
(Tanpepe)



Fig. 10: mealybug
(Eyele)



Fig. 11: Bedbug
(Idun)



Fig. 12: Goliath Beetle
(Alikan)



Fig. 13: Lice
(Ina)



Fig. 14: Web spinner
(Alabounboun)



Fig. 15: Moth
(Afopina)



Fig. 16: Winged Termite
(Esunsun)

Figures 1-16 shows the photographic documentation of *Kokoro* (Insects) found in Yorubaland.
Source: Kolawole C.Y (2025).

The visual data obtained from the photographic documentation reveal that insect morphology embodies inherent design principles such as symmetry, repetition, and structural rhythm. These characteristics are not merely biological features but function as foundational elements in visual composition. This indicates that the translation of insect forms into motifs is not arbitrary but structurally grounded in established design principles, thereby enhancing their suitability for contemporary applications.

Furthermore, the diversity observed across the insect species suggests a broad spectrum of design possibilities. This diversity supports the argument that *Kòkòrò* (insects)

can serve as a sustainable and renewable source of inspiration for designers seeking originality and cultural relevance.

Motif Extraction and Stylisation Processes

Analysis of the photographic images led to the successful extraction of motifs through abstraction, simplification, repetition, and recomposition. Key visual elements such as wing venation, body segmentation, antennae curvature, and surface markings were selectively transformed into stylised motifs as shown in Fig. 17-32. The results show that insect morphology naturally lends itself to rhythmic repetition and modular design,

which are essential principles in surface and textile design [13].

The extracted motifs shown in Fig. 17-32 maintained a balance between recognisability and abstraction, ensuring that the cultural and natural origins of the *Kòkòrò* (insects) forms were preserved without literal representation. This finding aligns with contemporary design scholarship, which advocates abstraction as a means of translating natural forms into culturally resonant yet modern visual languages [11]. The process further demonstrates that motif extraction from insects can generate diverse visual outcomes, ranging from organic flowing patterns to geometric-inspired arrangements.

The process of abstraction and stylisation demonstrates that *Kokoro* (insects)-derived forms can be transformed into visually coherent motifs without losing their intrinsic identity. This balance between abstraction and recognisability is critical in contemporary design, where visual simplicity must coexist with conceptual depth. The findings therefore suggest that insect morphology provides a flexible framework for generating both organic and semi-geometric design patterns.

In addition, the repetition and recomposition of extracted elements reveal the adaptability of *Kokoro* (insects)-based motifs across different design contexts. This reinforces the applicability of biomimetic approaches in textile and surface design.

Photographs of *Kokoro* (Insects)

Motif Extraction and Stylisation with CAD



Fig. 17: Butterfly (Labalaba)



Fig. 17: Butterfly (Labalaba) Motif



Fig. 18: Termite (Ikan)



Fig. 18: Termite (Eera) Motif



Fig. 19: Grasshopper (Tata)



Fig. 19: Grasshopper (Tata) Motif



Fig. 20: Housefly (Eshinshin)



Fig. 20: Housefly (Eshinshin) Motif



Fig. 21: Dragonfly (Lamilami)



Fig. 21: Dragonfly (Lamilami) Motif



Fig. 22: LadyBug (Kokoro Ladiboogi)



Fig. 22: LadyBug (Kokoro Ladiboogi) Motif



Fig. 23: Cockroach (Ayan)



Fig. 23: Cockroach (Ayan) Motif



Fig. 24: Millipede (Okun)



Fig. 24: Millipede (Okun) Motif



Fig. 25: Black Ant (Tanpepe)



Fig. 25: Black Ant (Tanpepe) Motif



Fig. 26: Mealybug (Eyele)



Fig. 26: Mealybug (Eyele) Motif



Fig. 27: Bedbug (Idun)

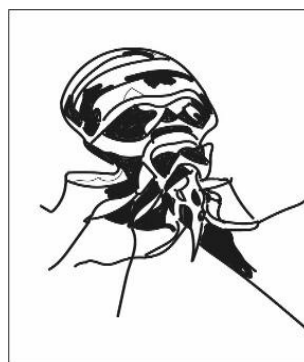


Fig. 27: Bedbug (Idun) Motif



Fig. 28: Goliath Beetle (Alikan)



Fig. 28: Goliath Beetle (Alikan) Motif



Fig. 29: Lice (Ina)



Fig. 29: Lice (Ina) Motif



Fig. 30: Web spinner (Alabounboun)

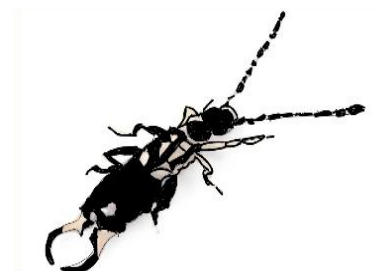


Fig. 30: Web Spinner (Alabounboun) Motif



Fig. 31: Moth (Afopin ina)

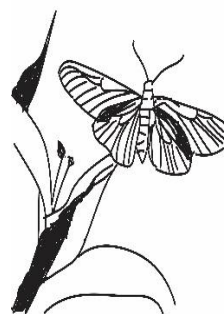


Fig. 31: Moth (Afopin ina) Motif



Fig. 32: Winged Termite (Esunsun)



Fig. 32: Winged Termite (Esunsun) Motif

Fig. 17-32 shows the motif extraction and stylisation processes
Source: Kolawole (2025)

Objective 3: Application of Extracted Motifs in Contemporary Design Contexts

When applied to selected contemporary design outputs, the extracted *Kòkòrò*-inspired motifs as shown in Fig. 33-48 proved aesthetically adaptable and visually coherent. The motifs demonstrated flexibility in scale, repetition, and orientation, indicating their suitability for various design applications, including textile surfaces and decorative patterns. This adaptability supports earlier studies that identify nature-derived motifs as effective tools for enhancing originality and sustainability in contemporary design [7].

The results further suggest that incorporating *Kokoro* (insects)-derived motifs expands the range of indigenous visual resources available to designers. While previous Yorùbá-inspired design studies have focused largely on plant forms and established cultural symbols, this research shows that *Kòkòrò* (insects) can function as alternative sources of inspiration that enrich contemporary African design vocabularies [8]. The motifs also reflect Yorùbá ecological realities, reinforcing cultural identity through locally grounded visual narratives.

Application of Extracted Motifs in Contemporary Design Contexts



Fig. 33: Application of Butterfly Motif in Contemporary Design Context



Fig. 34: Application of Termite Motif in Contemporary Design Context



Fig. 35: Application of Grasshopper Motif in Contemporary Design Context



Fig. 36: Application of Housefly Motif in Contemporary Design Context



Fig. 37: Application of Dragonfly Motif in Contemporary Design Context



Fig. 38: Application of Lady Bug Motif in Contemporary Design Context



Fig. 39: Application of Cockroach Motif in Contemporary Design Context



Fig. 40: Application of Millipede Motif in Contemporary Design Context

Contemporary Design Context



Fig. 41: Application of Black Ant Motif in Contemporary Design

Contemporary Design Context



Fig. 42: Application of Black Ant Motif in Contemporary Design



Fig. 43: Application of Bed Bug Motif in Contemporary Design Context



Fig. 44: Application of Goliath Beetle Motif in Contemporary Design Context



Fig. 45: Application of Lice Motif in Contemporary Design Context

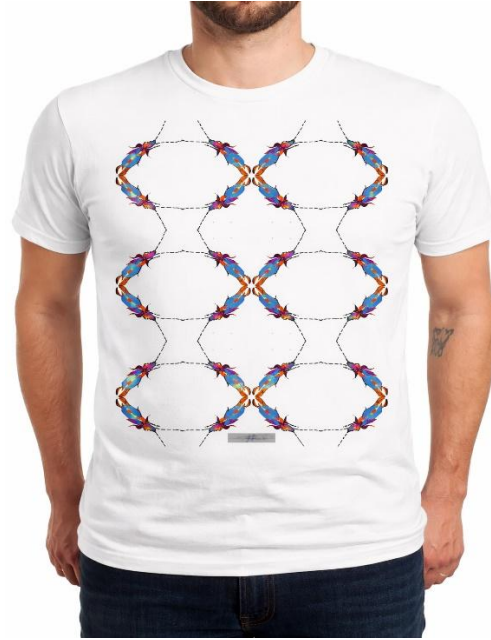


Fig. 46: Application of Web Spinner Motif in Contemporary Design Context



Fig. 47: Application of Moth Motif in Contemporary Design Context



Fig. 47: Application of Winged Termite Motif in Contemporary Design Context

Fig. 33-47: Application of Extracted Motifs in Contemporary Design Contexts
Source: Kolawole C.Y (2026)

The application of extracted motifs across various design contexts demonstrates their functional versatility and aesthetic

coherence. The ability of these motifs to maintain visual integrity at different scales indicates their suitability for both micro and

macro design applications. This adaptability is particularly important in textile design, where scalability and repeatability are essential.

Moreover, the integration of *Kokoro* (insect-derived motifs) into contemporary design outputs highlights the potential of indigenous ecological resources in redefining modern visual languages. This suggests that incorporating locally grounded inspiration can enhance both the cultural authenticity and innovative quality of design products.

Objective 4: Contribution to Design Knowledge and Practice

The findings confirm that photographic documentation combined with practice-based motif extraction offers a systematic and replicable framework for transforming indigenous natural forms into contemporary design resources. This contributes to design knowledge by demonstrating how insects often overlooked in motif studies can be repositioned as valuable visual and cultural assets. The study also supports calls within design research for deeper engagement with indigenous knowledge systems and local environments as foundations for sustainable and culturally meaningful design innovation [9].

The study contributes to design knowledge by establishing a structured methodology that integrates photographic documentation, visual analysis, and creative transformation. This framework is replicable and can be adapted to other natural forms, thereby expanding its relevance beyond the immediate context of *Kokoro* (insects)-inspired design.

Overall, the results and discussion affirm that *Kòkòrò* (insects)-inspired motifs are not only visually viable but also conceptually

relevant, bridging Yorùbá indigenous knowledge, ecological awareness, and contemporary design practice.

Contribution to Knowledge

The study contributes new knowledge by introducing insect-inspired indigenous motif extraction as a methodologically structured, culturally relevant, and design-innovative approach, thereby enriching contemporary African visual language and by expanding the theoretical and practical boundaries of design research.

Recommendations

Based on the findings of this study, several recommendations are proposed to enhance future research and professional practice in design and cultural studies. Firstly, future studies should expand the geographical scope beyond Yorùbáland to include other ecological and cultural regions in Nigeria and West Africa. Such comparative studies would provide broader insights into the visual and cultural potentials of insect-inspired motifs across diverse indigenous contexts.

Secondly, further research is recommended to explore advanced digital and printing technologies in the application of *Kòkòrò*-derived motifs. Techniques such as digital textile printing, laser cutting, and smart textile integration could be employed to test the functional and commercial viability of insect-inspired motifs in contemporary industrial production. Thirdly, interdisciplinary collaboration between designers, entomologists, and cultural scholars is encouraged. Such collaborations would enrich motif extraction processes by combining biological accuracy with cultural interpretation, ensuring that design translations remain respectful of indigenous knowledge while benefiting from scientific insights.

Additionally, design educators are encouraged to integrate nature-inspired and indigenous motif extraction methods into art and design curricula. Incorporating photographic documentation and practice-based experimentation into teaching frameworks would equip emerging designers with culturally grounded and environmentally responsive design skills. Finally, policymakers and cultural institutions should support initiatives aimed at documenting and preserving indigenous visual resources. Establishing digital archives of photographed *Kòkòrò* and their extracted motifs would aid cultural preservation efforts and provide accessible resources for designers, researchers, and creative industries.

Summary

This study investigated the photographic documentation and motif extraction of *Kòkòrò* (insects) found in Yorùbáland, with the aim of generating novel design motifs for contemporary applications. Through systematic field photography and visual analysis, high-resolution images of selected *Kòkòrò* (insects) revealed intricate formal qualities such as texture, symmetry, and segmentation that are well-suited to abstraction and transformation into design vocabulary. These findings align with contemporary design research that demonstrates photography's value as both a documentation and analytical tool for nature-inspired pattern development [7]. The extracted motifs, developed through processes of simplification, recomposition, and stylisation, showed adaptability across a range of visual applications, confirming insects as a viable source of indigenous design inspiration.

The study contributes to expanding the repertoire of culturally grounded sources available to designers, particularly by highlighting *Kòkòrò* (insects), an

underexplored visual resource in Yorùbá design heritage. Traditionally, Yorùbá textile studies such as research on *Adire* motifs and their cultural significance have focused largely on patterns drawn from history, folklore, and the environment [3]. While *Adire* and related textile traditions continue to be powerful symbols of identity and cultural expression, this research positions biological forms as complementary sources of visual meaning, reinforcing the ecological and cultural specificity of Yorùbá design practice.

Conclusion

In conclusion, this study successfully demonstrates that *Kòkòrò* (insects) possess significant visual and structural qualities that can be effectively translated into contemporary design motifs. Through a systematic process of photographic documentation, visual analysis, and motif extraction, the research establishes a practical framework for integrating indigenous ecological resources into modern design practice. The findings highlight the importance of exploring underutilised natural forms as sources of innovation, particularly within culturally rich environments such as Yorùbáland.

Furthermore, the study reinforces the relevance of practice-based research in bridging the gap between traditional knowledge systems and contemporary creative industries. By positioning insects as viable design resources, this research not only expands the scope of nature-inspired design but also contributes to the preservation and reinterpretation of indigenous visual culture. Future research is encouraged to explore interdisciplinary collaborations and advanced technological applications to further enhance the potential

of insect-inspired design in industrial and

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