

Research Article

The Sacred *Veranus niloticus* in Orogun Community, Delta State, Nigeria

Israel Omoghene Ogorode* , Ijeoma Favour Vincent-Akpu ,
Bolaji Benard Babatunde 

Department of Animal and Environmental Biology, University of Port Harcourt, Port Harcourt, Nigeria

Abstract

This study investigates the cultural significance of the Nile Monitor Lizard (*Veranus niloticus*) in Orogun community, Delta State, Nigeria. A mixed-methods approach was employed, using questionnaires and Key Informant Interviews (KIIs) to gather data. The questionnaire were administered to 200 adults from the total population of the people in the community. Chi-square tests were used for statistical analysis to determine significant associations. The results show that the presence of the Nile Monitor Lizard in Orogun community is not significant ($\chi^2 = 2.418$, $p > 0.05$) based on questionnaire responses. However, observations and KIIs confirmed the species' presence and cultural importance. The abundance of the Nile Monitor Lizard was significant ($\chi^2 = 6.520$, $p < 0.05$), with 60% of respondents affirming its presence. The species holds cultural significance ($\chi^2 = 7.370$, $p < 0.05$), with the community revering it as a deity. Interaction with the lizard is predominantly reverential ($\chi^2 = 0.421$, $p > 0.05$), with minimal disturbance. Conservation efforts are lacking ($\chi^2 = 6.520$, $p < 0.05$), with more respondents indicating a lack of support. Contrary to expectations, the Nile Monitor Lizard is not commonly used as a source of food and medicine ($\chi^2 = 25.240$, $p < 0.001$). The study highlights the importance of cultural conservation and traditional belief systems in protecting umbrella species like the Nile Monitor Lizard. The findings contribute to the understanding of human-reptile interactions and inform conservation strategies that respect cultural significance. Some of the recommendations made includes: Integrate cultural conservation into biodiversity protection efforts, promote education and awareness on the importance of conservation, support community-led conservation initiatives, investigate the impact of cultural beliefs on species conservation.

Keywords

Sacred, Veranus Niloticus, Cultural Significance, Traditional Conservation and Orogun Community

1. Introduction

The worship of sacred animals began in Egypt. These animals were used as animals, objects of the gods, symbols of fertility, or objects of fear, protection, and luck, and played an important role in Egyptian royal history. The Egyptians were interested in the beauty of animals, such as their strength, ability to protect animals, protection, caring behavior, and

connection to rebirth, and so they wanted to follow them. Because of these features, animals such as big cats, lions and cheetahs are considered exotic animals and symbols of royalty. In addition, animals such as crocodiles and hippos were treated with respect and worship by the ancient Egyptians in order to protect themselves from their wrath because they

*Corresponding author: israelogorode@gmail.com (Israel Omoghene Ogorode)

Received: 20 September 2024; **Accepted:** 14 October 2024; **Published:** 18 November 2024



Copyright: © The Author(s), 2024. Published by Science Publishing Group. This is an **Open Access** article, distributed under the terms of the Creative Commons Attribution 4.0 License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

were afraid of them. [27].

In African traditional societies, people protected sacred animals due to a theory called the Conservation of Resources Theory (CRT), introduced by Stevan E. Hobfoll, [18] This theory explains that people experience stress when they risk losing something valuable, which motivates them to preserve what they have and acquire more. According to [16], resources refer to anything a person values. The CRT builds upon earlier research by [30, 28, 11] and [21] who pioneered the study of stress in humans. The theory emphasizes that losing resources is more harmful than gaining them, so people invest resources to prevent loss. In African cultures, the creation of taboos to protect sacred animals stems from the belief that losing these species would be more stressful than gaining them [18]. Traditional African societies recognized the importance of these animals in maintaining ecological balance and understood the consequences of losing them. By preserving these animals through taboos, they aimed to prevent ecological crises and associated stress.

African religious beliefs play a crucial role in addressing ecological crises, particularly in preserving sacred animals for environmental sustainability. For instance, African religions view nature as a divine creation that must be respected and not exploited, emphasizing balance and harmony [13, 15]. This perspective recognizes the interconnectedness of all living things. Many people's religious beliefs encourage them to care for nature as a trust or stewardship, accounting for their actions [17, 20, 22, 15] Religious communities are increasingly acknowledging scientific findings on climate change and supporting policies based on these findings [15].

Animal worship, also known as zoolatry or theriolatry, refers to religious or ritual practices that involve animals. This can include: Worshipping animals as deities or gods, Sacrificing animals as part of a religious ritual, Believing that certain animals represent religious figures or spirits. When a particular species is considered sacred or representative of a religious figure, it is called an animal "cult". This means that the animal is revered and often worshipped, and may be treated with special care or consideration [1].

When visiting the Orogun Kingdom in Delta State, Nigeria, remember to respect the Nile monitor lizard. This large reptile, which can grow up to eight feet long, is highly revered and protected in the kingdom. Locals believe that harming or eating the lizard will bring severe punishment, including illness and even death, unless proper sacrifices are made. As a result, the Nile monitor lizard roams freely and safely throughout the kingdom, often seen strolling along roads and neighborhoods [25] The Orogun people have a strong tradition of respecting and worshipping the Nile monitor lizard, which they believe has extraordinary powers. According to their beliefs, the lizard saved them from danger in the past and continues to protect them today. They also worship dogs and tigers, which are considered sacred animals. The story behind this tradition is that the founder of the Orogun kingdom, Orogun, was saved by the Nile monitor lizard during a war.

The lizard formed a bridge for him to cross a river, allowing him to escape his enemies. From then on, the Orogun people have considered the Nile monitor lizard a sacred animal and do not eat it. The benefits of worshipping the Nile monitor lizard, according to the Orogun people, include protection from danger and guidance during times of uncertainty. They believe that if they disrespect the lizard, they will face severe consequences, including illness and death. The Orogun kingdom is located in Delta State, Nigeria, and has a population of over 50,000 people. Their tradition of worshipping the Nile monitor lizard is a unique aspect of their culture and identity [25].



Figure 1. A very Old *Varanus niloticus* in the area.

The Nile monitor lizard popularly known as iguana in Nigerian English [7] belong to the monitor lizard family *Varanidae*, found in sub Saharan and West Africa region. Though a Least Concern organism [31] it is a species of cultural significance.

The Nile monitor lizard is the longest lizard species in Africa, reaching lengths of one hundred twenty to two hundred twenty centimeters (three feet eleven inches to seven feet three inches), with some exceptional individuals growing up to two hundred forty-four centimeters (eight feet) in length [12] On average, the snout-to-vent length of a Nile monitor is approximately fifty centimeters (one foot eight inches). However, their body mass can vary significantly, ranging from zero point eight to one point seven kilograms (one point eight to three point seven pounds) according to one study, while others report weights of five point nine to fifteen kilograms (thirteen to thirty-three pounds) for larger monitors [5] Notably, exceptionally large specimens can weigh up to twenty kilograms (forty-four pounds), although the average weight of this species is generally lower than that of the rock monitor.

The Nile monitor boasts an impressive physique, with muscular bodies, sturdy legs, and formidable jaws equipped with sharp, pointed teeth in their youth, which later become blunt and peg-like with age. Their arsenal also includes razor-sharp claws, perfect for scaling trees, digging burrows, defending themselves, or tearing into prey. Like all monitors, they possess forked tongues with highly developed olfactory

properties, allowing them to detect subtle scents. But what truly sets them apart is their striking, variable skin patterns - a mesmerizing mix of greyish-brown hues, greenish-yellow bars on their tails, and large, rosette-like spots on their backs, complete with tiny black centers. Their throats and undersides showcase a warm, sunny palette of ochre-yellow to creamy-yellow, often accented with faint bars, making each Nile monitor a unique work of art.

The Nile monitor's distinctive nostrils, positioned high on their snouts, reveal their remarkable adaptability to aquatic life. But these versatile creatures are not limited to water - they are also agile climbers and swift runners on land, making them formidable predators in multiple domains. Their diverse diet reflects their opportunistic nature, encompassing a wide range of prey, including: Aquatic delights: fish, frogs, and toads (even poisonous species), reptilian fare: turtles, snakes, lizards, and young crocodiles, avian treats: birds and their eggs, small mammals: rodents, domestic cats, and even young antelopes, Invertebrate morsels: a variety of insects and other invertebrates. Their dietary flexibility is a testament to their remarkable adaptability and hunting prowess [6, 2, 23].



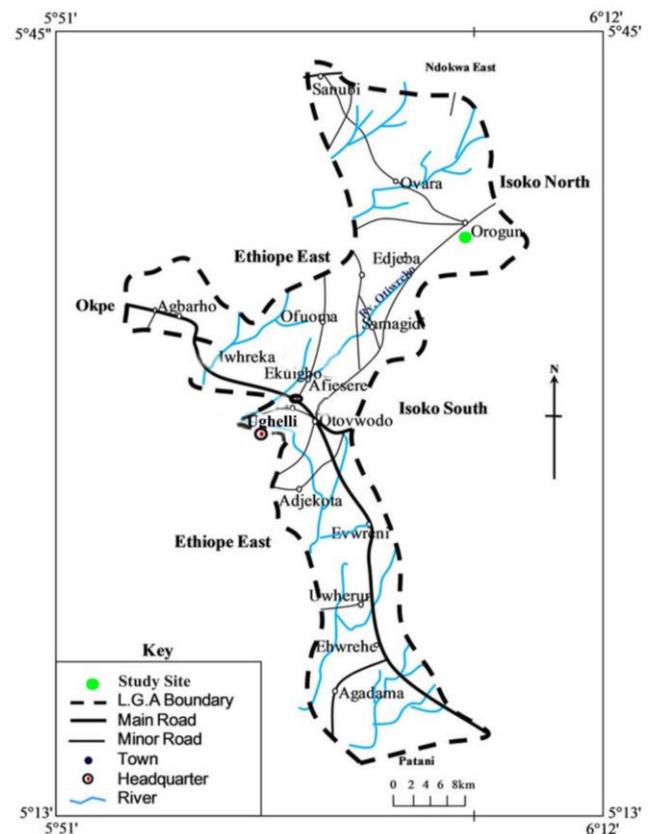
Figure 2. Nile Monitor Lizard foraging.

The conservation status notwithstanding, the Nile monitor lizard (*Varanus niloticus*) play significant ecological and cultural role in its native habitats [18] hence the need to employ all conservation efforts to ensure the sustainable abundance of this sacred umbrella species.

2. Materials and Methods

The study was conducted in Orogun community, located in

Urhobo land, Delta State, Nigeria. Orogun Kingdom is situated within Ughelli North Local Government Area, bordered by: Abraka Kingdom (North), Agbarha Kingdom (South), Kokori and Eku in Agbon Kingdom (West), Abbi, Umuebu, and Amai Kingdoms (East), Emevor and Owhelogbo in Isoko North Local Government Area (South-east). Geographically, Orogun community lies between: Latitude $5^{\circ}40'36.35''N$ and Longitude, $6^{\circ}12'17.45''E$ [10]. The kingdom is divided into five quarters: Unukpo, Umusu, Imodje, Emonu, and Ogwa, and comprises 22 towns, including Orogun Inland (Otorho), the traditional headquarters. The area is predominantly agrarian and has a network of roads connecting various places, including streams, farms, markets, and settlements. [24]



Source: Efe, 2013

Figure 3. Coordinate Map of Study Area.

The study made use questionnaire and Key Informants Interview (KII) as the sampling and testing tools. A 30-item questionnaire on the presence, abundance, relationship and cultural significance of the Nile monitor lizard was administered to 200 adults individuals out of the population in the whole community. A recoded KII was adopted to elicit responses from stakeholders to prove authenticity of the sacred information on the species under study.

Statistical Analysis

Chi-square test tool was used to analyse the results obtained from the questionnaire.

3. Results and Discussion

3.1. Demographic Characteristics of Respondents in Orogun

From Table 1, Among the 200 respondents, 80 (40%) are male while 120(60%) of them were female. The ages of the respondents were between the ages of 20 -70 years as 50(29.4%) of them are between 20-40 years of age, 80(47.1%) are between 40-70years of age while the rest are 70 years old of age (23.5%). 150 of the respondents were either single [60(40%)], married [80(53.3%)] or single parents [10, (6.7%)]. The Educational level of the respondents (160) were recorded as 50 (33.3%) primary school leavers, 70(43.8%) were of secondary school level and 40 (25%) graduated from one tertiary institution or the other. The cultural background of the respondents stated that out of 145 respondents, 120 (82.8%) were Indigenes, 15(10.3%) were strangers while 10(6.9%) of the respondents were visitors dwelling in the community for a time.

Table 1. Demographic characteristics of Respondents in Orogun.

Variable	Number of Respondents (200)	Percentage (%)
Gender (200)		
Male	80	40%
Female	120	60%
Age (170)		
20-40 years	50	29.4%
40- 70 years	80	47.1%
70 years old and above	40	23.5%
Marital Status (150)		
Single	60	40%
Married	80	53.3%
Single parents	10	6.7%
Education (160)		
Primary School level	50	33.3%
Secondary school level	70	43.8%
Tertiary school level	40	25%
Cultural Background (145)		
Indigenes	120	82.8%
Strangers	15	10.3%

Variable	Number of Respondents (200)	Percentage (%)
Visitors	10	6.9%

3.2. Result from Questionnaire

The polar question in the questionnaire are grouped into seven categories.

On the presence of Nile Monitor Lizard in Orogun community, 120 of the respondents picked YES as observed frequency, while 80 respondents ticked NO as observed frequency. The expected frequency of the test for YES indicate 104.32, while the expected frequency for NO options indicate 95.868. The Chi square (X^2) for both YES and NO are 2.418 and 2.626 respectively indicating that it is not significant since. The results on abundance of Nile Monitor Lizard in Orogun from the questionnaire show that 120 respondents ticked YES while 50 of the respondents picked NO as observed frequency while expected frequency for YES and NO is 88.512 and 81.448 respectively where the chi square for the YES and NO options indicate significant. For relationship with Nile Monitor Lizard (n=180), The Observed Frequencies YES: is 100 NO is 80, the expected Frequencies: for YES: (93.719), NO: (86.281). Thi-square Values states X^2 (YES): 0.421and X^2 (NO): 0.457 indicating that it is not significant.

For Cultural Significance, The observed frequency for the cultural significance of the Nile Monitor Lizard was significantly higher than expected, as indicated by the Chi-square values (7.370 for YES and 8.005 for NO). This suggests a strong cultural appreciation for the species. The responses on interaction with the Nile Monitor Lizard showed a lower than expected frequency of engagement (80 YES vs. 100 NO). The Chi-square values (2.008 for YES and 2.181 for NO) indicate a slight deviation from expected interactions, suggesting that while some interactions exist, they may not be as prevalent as anticipated. On the Conservation of the species in Orogun community, the results indicate a notable difference between observed and expected frequencies, particularly in the NO category. The Chi-square values (6.520 for YES and 7.082 for NO) suggest a significant concern regarding conservation, with more respondents indicating a lack of support for conservation efforts. For option on Nile Monitor Lizard as Source of Food and Medicine, the data revealed a stark discrepancy. The observed YES frequency (30) was much lower than expected (72.893), leading to high Chi-square values (25.240 for YES and 27.415 for NO). This suggests that the lizard is not widely regarded in this capacity, indicating potential cultural shifts or changes in utilization.

Table 2. Polar Questions on perception of Nile Monitor Lizard by Orogun Indigenes.

Variables from Questionnaire	YES (Observed)	NO (Observed)	YES (Expected Frequencies)	NO (Expected Frequencies)	X ² (YES)	X ² (NO)
Presence of Nile Monitor Lizard (n= 200)	120	80	104.132	95.868	2.418	2.626
Abundance of Nile Monitor Lizard (n=170)	120	50	88.512	81.488	11.201	12.167
Relationship with Nile Monitor Lizard (n =180)	100	80	93.719	86.281	0.421	0.457
Cultural Significance of Nile Monitor Lizard (n= 180)	120	60	93.719	86.281	7.37	8.005
Interaction with Nile Monitor Lizard (n=180)	80	100	93.719	86.281	2.008	2.181
Conservation of Nile Monitor Lizard (n=160)	60	100	83.306	76.694	6.52	7.082
Nile Monitor Lizard as source of Food and Medicine (n=140)	30	110	72.893	67.107	25.24	27.415

Chi square = 115.111. P- Value is 0.0000 significant at $P < 0.05$

4. Discussion

Though the results on the Presence of Nile Monitor Lizard in Orogun community show not Significance based on the responses from the questionnaire but our observations and evidences based on KII and [figure 1](#) revealed the presence of the species in the land. This agrees with [\[10\]](#) stating that the Nile Monitor Lizard are evidently available in community as they revere it as gods and deity which at one time defended them at the time of war. [\[8\]](#) stated that different species of monitor lizard exist in Sub Sahara Africa of which Nigeria is one of them. From our results, the abundance of Nile Monitor Lizard in Orogun is significant. This implies that a large number of monitor lizard are seen daily in residential areas in Orogun community. The Nile monitor lizard easily move about in the community [\[25\]](#) The relationship between the Orogun people and the monitor lizard can be inferred from the cultural significance as they revere the species and serve it as a deity [\[1, 10, 25\]](#) The interaction data showed a lower than expected frequency of engagement The results indicate a slight deviation from expected interactions, suggesting that while some interactions exist, they may not be as prevalent as anticipated. The interaction with the *Veranus niloticus* is more of reverence for the species and no disturbance of any form [\[10\]](#). The Conservation of monitor lizard from the results of data collected indicate a notable difference between observed and expected frequencies, particularly in the NO category which suggest a significant concern regarding conservation, with more respondents indicating a lack of support for conservation efforts. This may be as results of ignorance and subjective decisions in responding to polar questions presented in the questionnaire. Our observations and belief system of the people in Orogun community is an indirect form of conservation as dictated in [\[25, 19, 3, 4\]](#), For

Food and Medicine, the results showed a big difference between what was expected and what was actually observed regarding the Nile Monitor Lizard being used as a source of food and medicine according to the results from the questionnaire, only very few people said YES, which is much lower than the number that ticked NO. This suggests that the Nile Monitor Lizard is not commonly used for food and medicine in this community, which could indicate a change in cultural practices or traditions. Also, the Nile monitor lizard is a source of food proteins hence it is been hunted in many places around Africa [\[14\]](#) but the traditional belief system have placed an embargo on these community restricting them and outsiders from hunting this sacred umbrella species for food and medicine [\[25, 10\]](#)

5. Conclusion

The research investigated the cultural significance and utilization of the Nile Monitor Lizard in Orogun community. The results show: No significant association between the presence and relationship with the Nile Monitor Lizard, indicating a neutral or indifferent attitude towards the species. A significant association with the abundance, cultural significance, and conservation of the Nile Monitor Lizard, highlighting its importance in the community. A highly significant association with the use of the Nile Monitor Lizard as a source of food and medicine, but with a stark discrepancy between observed and expected frequencies, suggesting a decline in this traditional practice though not in reality.

Abbreviations

CRT	Conservation of Resources Theory
KII	Key Informants Interview

Author Contributions

Israel Omoghene Ogorode: Conceptualization, Investigation, Methodology, Writing – original draft

Ijeoma Favour Vincent-Akpu: Methodology, Supervision, Writing – review & editing

Bolaji Benard Babatunde: Methodology, Supervision, Writing – review & editing

Conflicts of Interest

The authors declare no conflicts of interest.

References

- [1] Baldick, J (2000). "Animal and Shaman: Ancient Religions of Central Asia" New York University Press, New York
- [2] Bennett, D & Basuglo, B. (1999). University of Aberdeen Black Volta Expedition 1997 Final Report. Viper Press. p. 138. ISBN 9780952663232.
- [3] Bhattacharva, S & Koch, A (2018) Effects of Traditional Beliefs Leading to Conservation of Water Monitor Lizards (*Varanus salvator*) and Threatened Marselands in West Bengal, India. *Herpetological Conservation and Biology* 13(2): 408–414.
- [4] Chakravorty, J., V. B. Meyer-Rochow, and S. Ghosh. 2011. Vertebrates used for medicinal purposes by members of the Nyishi and Galo tribes in Arunachal Pradesh (North-East India). *Journal of Ethnobiology and Ethnomedicine* 7: 13.
- [5] Condon, K. (1987). A kinematic analysis of mesokinesis in the Nile monitor (*Varanus niloticus*). *Experimental biology*, 47(2), 73.
- [6] Dalhuijsen, Kim et al: "A comparative analysis of the diets of *Varanus albigularis* and *Varanus niloticus* in South Africa. *African Zoology* 49(1): 83–93 (April 2014).
- [7] Dickson, A. (23 February 2018). "Inside the OED: can the world's biggest dictionary survive the internet?". *The Guardian*. Archived from the original on 16 November 2020. Retrieved 13 December 2020.
- [8] Dowell, S. A., D. M. Portik, V. de Buffrenil, I. Ineich, E. Greenbaum, S. O. Kolokotronis and E. R. Hekkala. 2016. Molecular data from contemporary and historical collections reveal a complex story of cryptic diversification in the *Varanus* (*Polydaedalus*) *niloticus* Species Group. *Molecular Phylogenetics and Evolution* 94(Part B): 591-604. <https://doi.org/10.1016/j.ympev.2015.10.004>
- [9] Efe, I. S. (2013) Waste Disposal Problems and Management in Ughelli, Nigeria, *Journal of Environmental Protection* Vol. 4(4A), 1-8p.
- [10] Efenakpo, D. O (2016). Ecological Survey and Social Acceptability of Monitor Lizard in Orogun, Delta State, Nigeria. A PhD Pre-field Presentation. www.researchgate.com
- [11] Elliot, G. R & Eisendorfer, C., (1982). Stress and human health. New York: Springer.
- [12] Enge, K. M., Krysko, K. L., Hankins, K. R., Campbell, T. S., & King, F. W. (2004). Status of the Nile monitor (*Varanus niloticus*) in southwestern Florida. *Southeastern Naturalist*, 3(4), 571-582.
- [13] Francis (2015). Laudato Si'. https://www.vatican.va/content/francesco/en/encycicals/documents/papa-francesco_20150524_encicicalaudato-si.html
- [14] Ghimire HR, Phuyal S, Shah KB (2014). "Protected species outside the protected areas: People's attitude, threats and conservation of the Yellow Monitor (*Varanus flavescens*) in the Far-western Lowlands of Nepal". *Journal for Nature Conservation*. 22(6): 497–503. Bibcode: 2014JNatC. 22. 497G. <https://doi.org/10.1016/j.jnc.2014.08.003>
- [15] Global Buddhist Climate Change Collective. (2015) Buddhist Climate Change Statement to World Leaders. <https://gbccc.org/>, accessed 15 April 2016
- [16] Halbesleben, J. B, Paustian-Underdal, S. C & Westman, M. (2014). Getting to the COR: Understanding the role of resources in the conservation of resources theory. *Journal of Management*. 40. 5. 1334-1364.
- [17] Halpert J (2012) Judaism and Climate Change. *Yale Climate Connections* 29 February, <http://www.yaleclimateconnections.org/2012/02/judaism-and-climate-9change/> accessed 15 April 2016
- [18] Hobfoll, S. (1989). Conservation of resources: A new attempt at conceptualizing stress. *The American Psychologist*. 44(3) 513-524.
- [19] Ijeomah, H. M, Odunlami, S. S & Obi, L. I (2019). Assessment of Tourists' Attractions and Local Conservation of Monitor Lizard (*Varanus niloticus*) in Ndoni Community, Rivers State, Nigeria. *Nigerian Journal of Wildlife Management*. 3(1): 36-44. <https://wildlifesocietyng.org/ojs/index.php/wildlifesocietyng-journal/index>
- [20] Islamic International Climate Change Symposium. (2015) The Islamic Declaration on Global Climate Change. <http://islamicclimatedeclaration.org/islamicdeclaration-on-global-climate-change/> accessed 15.
- [21] McGrath, J. (1970). A conceptual formulation for research on stress. *Social and Psychological Factors for Research on Stress*. 10. 21.
- [22] Northcott M (2013) A Political Theology of Climate Change. Eerdmans: Grand Rapids, MI.
- [23] Odendaal, F & Rojas, C (2007). Richtersveld: The Land and Its People. Struik. p. 176. ISBN 9781770073418.
- [24] Odivwri, J. E, (2014). Functions and Consequences of Bilingualism in Orogun Kingdom of Urhobo Land, Delta State, Nigeria. *Journal of Linguistic Sociology*. Corpus ID: 56041605. <https://www.semanticscholar.org>
- [25] Okpunor, V. (2021, June 19). Why Urhobo Community Of Orogun Worships Iguana And Dog. Urhobo Today Newspaper. State News. Published 19th June, 2021.

- [26] Ormsby, A. A., and S. A. Bhagwat. 2010. Sacred forests of India: a strong tradition of community-based natural resource management. *Environmental Conservation* 37: 320–326.
- [27] River, C (2020, May 15) Sacred animals of ancient Egypt | Reading Museum. <https://www.readingmuseum.org.uk>
- [28] Selye, H. (1950). The physiology and pathology of exposure to stress. *Monteral: Acta*.
- [29] Uyeda, L. T., E. Iskandar, A. Purbatraptsila, J. Pamungkas, A. Wirsing & R. C. Kyes. (2016.) The role of traditional beliefs in conservation of herpetofauna in Banten, Indonesia. *Oryx* 50: 296–301.
- [30] Walter, (1932) In Ikechukwu, A.K O (n.d) Sacred Animals And Igbo-African Ecological Knowledge System (edited, Chapter 1).ORCID iD: 0000-0003-1977-2023
- [31] Wilms, T.; Wagner, P.; Luiselli, L.; Branch, W. R.; Penner, J.; Baha El Din, S.; Beraduccii, J.; Msuya, C. A.; Howell, K.; Ngalason, W. (2021). "*Varanus niloticus*". IUCN Red List of Threatened Species. 2021.