

## Review Form 1.6

Journal Name:	<a href="#">Annual Research &amp; Review in Biology</a>
Manuscript Number:	<b>Ms_ ARRB _82484</b>
Title of the Manuscript:	<b>Population Status, Feeding Behaviour and Habitat Preference of Helmeted Guinea Fowl (Numida meleagris) in Surrounding Vegetation of Cross River University Technology, Obubra Campus</b>
Type of the Article	

### **General guideline for Peer Review process:**

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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### PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<b>Compulsory</b> REVISION comments	<p>In preliminary survey, was collected per three months each season. But in "Estimating population", was collected for ten months. Data of preliminary survey was registered in article?</p> <p>I suggest add the statistic program in the Methodology.</p> <p><b>In Materials and Methods (Data analysis):</b></p> <ul style="list-style-type: none"><li>- Where is the complete legend of the formula of IVI?</li></ul> <p><b>In Results (Population Size of Helmeted Guinea Fowl in the study area):</b></p> <ul style="list-style-type: none"><li>- Correct to: "For the wet and dry seasons, a total of <b>727</b> helmeted guinea fowls were recorded."</li><li>- I suggest add data of population density following the abstract.</li><li>- I suggest remove the figure 01.</li></ul> <p><b>In Table 01:</b></p> <ul style="list-style-type: none"><li>- Correct to: "Population <b>size</b> of helmeted guinea fowl in the different sectors. N, W, E, and S = Northern, Western, Eastern and Southern sectors."</li><li>- I suggest add total each columns.</li></ul> <p><b>In Results (Feeding/Behaviour Pattern of Helmeted Guinea Fowl in the study area):</b></p> <ul style="list-style-type: none"><li>- Correct to: "They was a significant difference in the feeding and behavioural pattern of guinea fowls in both seasons (<math>\chi^2 = 4.04</math>, <math>p = 0.001</math>) (Table 2)".</li><li>- I suggest add scientific names in "<i>Gmelina arborea</i> (Gmelina), <i>Tectona grandis</i> (teak) and <i>Elaeis guineensis</i> (oil palm) were the most dominant plant species observed across habitats during the study (Table 4)".</li><li>- I suggest add table with type of food items each season.</li></ul> <p><b>In Table 02:</b></p> <ul style="list-style-type: none"><li>- Correct to "<math>\chi^2 = 4.043</math>".</li><li>- Correct to "15:30" and "15:30 – 18:30".</li><li>- I suggest compare data for season and describe in table or figure.</li></ul> <p><b>In Table 04:</b></p> <ul style="list-style-type: none"><li>- Add legend for RD.</li><li>- Correct to "<i>Mangifera indica</i>", "<i>Tetrapleura tetraptera</i>" and "<i>Afzelia africana</i>".</li></ul> <p>I suggest add tables 03 and 04 in this topic "Habitat Preference/Plant Species Composition of Helmeted Guinea Fowl in the study area".</p> <p>Where's the data of ANOVA and t-test in results?</p> <p>Add references 03 and 10 on text. Add "Sutherland, 2000" in reference's list.</p>	
<b>Minor</b> REVISION comments	<p>Review the journal's rules for legends of tables and figures.</p> <p>Review the journal's rules for references. Pay attention in following references: 1, 5, 7, 8, 9, 11, 12, 13, 15, 16, 17 and 18.</p> <p><b>In abstract:</b></p>	

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	<ul style="list-style-type: none"> <li>- Correct to: "Data generated from the research were analyzed using descriptive statistics, while results were compared using chi-square (<math>\chi^2</math>) test, <b>one way Analysis of Variance and t-test</b>."</li> <li>- Correct to: "The relationship between allocated time to each activity and time of the day was greatly significant (<math>\chi^2 = 4.04</math>, <math>p = 0.001</math>)."</li> </ul> <p><b>In Introduction:</b></p> <ul style="list-style-type: none"> <li>- Correct to: "The <b>specie</b> is highly polygamous and form breeding pairs [16]."</li> <li>- Correct to: "Though the <b>specie</b> is classified by the <b>International Union for the Conservation of Nature and Natural Resources</b> as least concerned (LC) [9]. The increasing human population, conversion of land for agriculture, burning and environmental degradation have resulted to the decline in the population of the <b>specie</b>."</li> <li>- Correct to: "Though the <b>specie</b> is wide spread and sparingly distributed in areas where it occurs, the current status of its population, feeding behaviour and habitat preference, as well as its management problems as it relate to human interference are still poorly reported [13]. This is necessary to prevent the decimation of the <b>specie</b> population, emigration to other unsafe areas, and possible extermination."</li> <li>- Correct to: "These constitutes the major factors threatening the survival of the helmeted guinea fowl within its range, thereby mounting pressure on the <b>specie</b> population and its habitat."</li> <li>- Correct to: "This can reduce emigration of <b>specie</b> to unsafe areas, maintain a balance in its population if not increase it numbers, and ensure the protection of the <b>specie</b> and its habitat."</li> </ul> <p><b>In Materials and Methods (Study Area):</b></p> <ul style="list-style-type: none"> <li>- Correct to: "The study was conducted in the surrounding vegetation of Obubra campus of Cross River University of Technology. The area lies between <b>latitude 5° 45'</b> and <b>6° 15'</b> North of the equator and longitude 8° 12' East. The total land area of Obubra is 1115km<sup>2</sup> [11]. The climate is characterized by distinct wet and dry seasons, with an annual rainfall distribution of between 2500mm to 3000mm, and an annual temperature of <b>25 – 27° C</b> [1]."</li> </ul> <p><b>In Materials and Methods (Sampling techniques and experimental procedure):</b></p> <ul style="list-style-type: none"> <li>- Correct to: "Preliminary survey was conducted to determine the potential location of the <b>specie</b> in the study area."</li> <li>- Correct to: "Three (3) transects each measuring 3km and 10m in width <b>was</b> be laid in upland agricultural field (UAF), lowland swamp field (LSF) and secondary forested area (SFA) in each of the sectors respectively."</li> <li>- Correct to: "The <b>specie</b> abundance was recorded using the visual and call method."</li> <li>- I suggest add a map of the points's and transects sampling.</li> </ul> <p><b>In Materials and Methods (Estimating population):</b></p> <ul style="list-style-type: none"> <li>- I suggest to remove: ".....equation 1"</li> <li>- Correct to: "The population density was determined using the formula <math>D = \sum n \frac{2LW}{n}</math>, <b>where</b> L = Total transect, n = Number of the species detected, W= width of transect, D = Estimated density of the species [2]."</li> </ul> <p><b>In Materials and Methods (Feeding behaviour):</b></p> <ul style="list-style-type: none"> <li>- Correct to: "Time spent and activity carried out during foraging, time of day, length and site of perching, preening, resting, and flying <b>was</b> recorded using field observations [15]. The focal sampling method was used repeatedly to watch and follow the <b>specie</b> for ten minutes, early in the morning and late in the evening."</li> </ul>	
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	<p><b>In Materials and Methods (Data analysis):</b></p> <ul style="list-style-type: none"><li>- Correct to: "The importance value index (IVI) for three species in each transect was calculated using the formula: <math>IVI = RD + RF + RDO</math>, where RD = relative dominance [5]."</li></ul> <p><b>In Results (Population Size of Helmeted Guinea Fowl in the study area):</b></p> <ul style="list-style-type: none"><li>- Correct to: "The total number of guinea fowls in the study area was significantly different (<math>\chi^2 = 8.00</math>, <math>p = 0.03</math>) in both the wet and dry seasons (Figure 1)."</li></ul> <p><b>In Results (Feeding/Behaviour Pattern of Helmeted Guinea Fowl in the study area):</b></p> <ul style="list-style-type: none"><li>- Correct to: "The <b>specie</b> was found to be feeding mostly on insects, worms, and fresh grasses, especially during the wet season."</li><li>- In table 02: Correct to "15:30" and "15:30 – 18:30".</li></ul> <p><b>In Results (Habitat Preference/Plant Species Composition of Helmeted Guinea Fowl in the study area):</b></p> <ul style="list-style-type: none"><li>- Correct to: "Significant relationship existed between seasons and across habitats (<math>\chi^2 = 12.00</math>, <math>p = 0.02</math>)."</li></ul> <p><b>In Discussion:</b></p> <ul style="list-style-type: none"><li>- Correct to: "The study showed though that the <b>specie</b> was generally abundant in the study area, the number of guinea fowls observed showed variations across sectors with the southern sector having the highest population, closely followed by the northern sector."</li><li>- Review the journal's rules for citation "Sutherland, 2000".</li><li>- Correct to: "The upland agricultural field was most preferred by the <b>specie</b> during both seasons, followed by the lowland swamp field. This was due to the availability of different species of invertebrates for consumption by the <b>specie</b> [17]. The <b>specie</b> also utilizes swamp areas for drinking water during evening hours, and for rest when the weather is extremely hot [18]. Low numbers of the <b>specie</b> was observed in the secondary forested area. The helmeted guinea fowl usually prefers open space for feeding, shelter, escape from predators and mating. However, the selectivity preference of this <b>specie</b> was greatly dependent on varied environmental and anthropogenic factors within the surrounding vegetation of the study area as emphasized by [7]."</li><li>- Correct to: "The disappearance of the guinea fowl habitat was <b>as</b> a result of persistent agricultural activities, local poaching and habitat changes resulting from annual bush burning, erosion and other anthropogenic activities."</li></ul> <p><b>In Conclusion:</b></p> <ul style="list-style-type: none"><li>- Correct to: "The <b>specie</b> population is under threat of man's interference in the form agricultural activities and hunting of the <b>specie</b> for meat. The protection of the <b>specie</b> habitat through demarcation and fencing can ensure the protection of the <b>specie</b> and increase its population as well."</li></ul>	
<b>Optional/General</b> comments	I suggest using Repeated Measures ANOVA to analyse the number of helmeted guinea fowl for month, for sector and/or for different habitats.	

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PART 2:

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	(If yes, Kindly please write down the ethical issues here in details)	

Reviewer Details:

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