

Ectoparasites of Poultry in Nsukka Municipality

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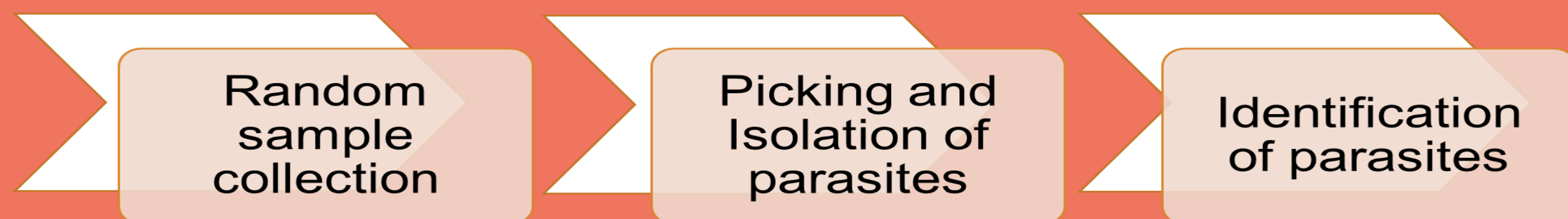
Background

Poultry keeping is one of the most popular types of livestock farming in the Nsukka area. It is seen as simple and uncomplicated. Nearly all the local families in this area incorporate poultry keeping as part of household farms. The poultry keeping serves as a major family income, as well as a form of rural employment for the youth. It is the second most widely eaten type of meat in this area together with eggs as it provides nutritional benefits.. Poultry is known to contain high-quality protein accompanied by a low proportion of fat (Eosili, 2008). Household poultry is often threatened by an outbreak of ectoparasitic diseases causing significant damages to animal health. They interfere with the birds feeding habits, resulting in low productivity and financial loss. We examined the prevalence of ectoparasites in household poultries in five different locations in Nsukka municipality and observed a significant difference in the prevalence of ectoparasite amongst the species examined.

Methods



Plates 1, 2 and 3 Poultry species



Plates 4 and 5: Household cages for random sampling of birds

Analysis

Prevalence
Intensity

Sex
Location
Age

References

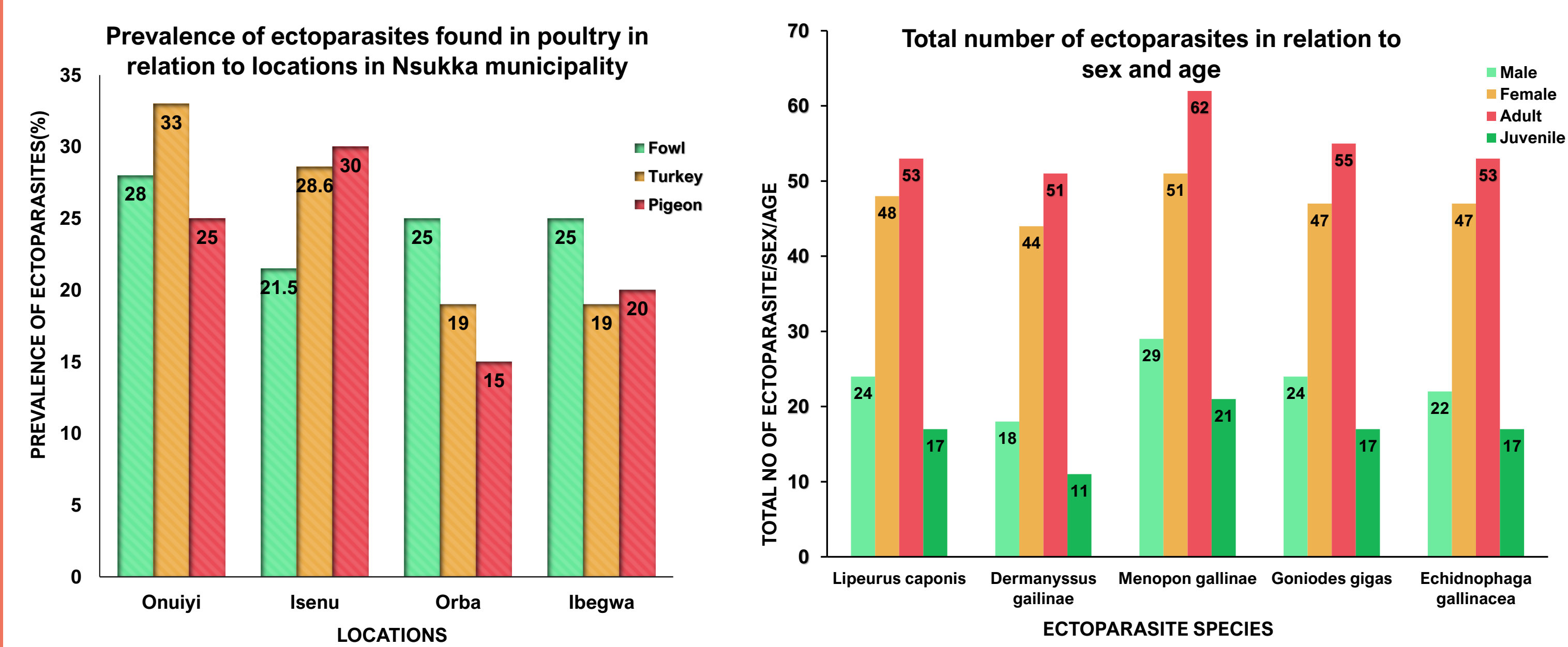
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Results

The result revealed a significant difference in the prevalence of ectoparasite amongst the species observed: *Lipeurus caponis* (92.3%), *Menopon gallinae* (96.2%), *Goniodes gigas* (90.4%), *Dermanyssus gallinae* (78.8%) and *Echidnophaga gallinacea* (86.5%). Lice were the most abundant and prevalent ectoparasite. Comparison of ectoparasites with age showed a statistically significant difference between adult and juvenile birds ($p < 0.05$). While comparison within sex revealed no significant difference between male and female birds ($p > 0.05$).

Table 1: Overall prevalence and intensity of Ectoparasites in Fowl, Turkey and Pigeon

Bird	Ectoparasites species	No of male infested	No of females infested	Total no infested	Prevalence	Intensity \pm SD
Fowl	<i>Lipeurus caponis</i>	16	32	48	92.3	1.69 \pm 0.92
	<i>Dermanyssus gallinae</i>	10	31	41	78.8	1.44 \pm 0.96
	<i>Menopon gallinae</i>	17	33	50	96.2	2.50-1.0.78
	<i>Goniodes gigas</i>	15	32	47	90.4	1.87 \pm 1.01
	<i>Echidnophaga gallinacea</i>	15	30	45	86.5	0.98 \pm 0.50
Turkey	<i>Lipeurus caponis</i>	5	7	12	57.1	2.95 \pm 2.89
	<i>Dermanyssus gallinae</i>	6	8	14	66.7	2.43 \pm 1.86
	<i>Menopon gallinae</i>	8	10	18	85.7	4.67 \pm 2.65
	<i>Goniodes gigas</i>	6	9	15	71.4	3.48 \pm 2.42
	<i>Echidnophaga gallinacea</i>	4	10	14	66.7	2.57 \pm 1.96
pigeon	<i>Lipeurus caponis</i>	3	7	10	50.0	0.65 \pm 0.75
	<i>Dermanyssus gallinae</i>	2	5	7	35.0	0.55 \pm 0.83
	<i>Menopon gallinae</i>	4	8	12	60.0	0.85 \pm 0.88
	<i>Goniodes gigas</i>	3	6	9	45.0	0.50 \pm 0.61
	<i>Echidnophaga gallinacea</i>	3	7	10	50.0	0.75 \pm 0.85



Discussion

The importance of these ectoparasites transcends the direct impact on poultry production limiting the protein available to humans. Ectoparasites damage feathers, causes skin irritation and lesions, resulting in reduced production yield in adult birds and direct harm to the juveniles (Arends, 2003). There was a statistically significant between the adult and juvenile birds examined ($p < 0.05$) the adult birds was observed to have more ectoparasites than the juvenile and this agreed with the findings of Permin *et al.* (2002), Sabuni, (2009) and Biu *et al.* (2007). Mungube *et al.* (2008) reported a slightly higher rate of ectoparasites prevalence in males compared to females, while Biu *et al.* (2007) found that female birds had a higher prevalence of ectoparasites (15.4%), than male birds (14.7%). However, in this work there was no statistically significant differences between sexes among the birds examined ($p > 0.05$). The present study found Lice to be the most prevalent ectoparasite of poultry observed, in contrast to previous works by Maim, (2005) and Mungube *et al.* (2008) where stick tight flea *Echidnophaga gallinacea* was reported to be the most prevalent ectoparasite, with a statistical significance observed across species examined.

Conclusion

Although there was no significant difference in infection rate of ectoparasites between locations, the overall result showed a high prevalence of ectoparasite in the study area. Hence;

- Conscious effort is required to curb the ectoparasite burden in this area.
- Proper hygiene and a clean suitable environment around the poultry should be encouraged amongst farmers to reduce parasite load,
- There need to mount an enlightenment programme to educate the farmers on the reproductive cost of ectoparasites on their birds and how it can be prevented..