

# Vigilance and feeding behaviour of village weavers (*Ploceus cucullatus*) in Amurum Forest Reserve, Nigeria



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## Background

- Many birds stop to scan their surroundings for potential predators while feeding.
- This anti-predatory vigilance refers to the proportion of time spent by a bird raising its head during the foraging period.
- Village weavers look for food on the ground, but also look up and search vegetation in order to avoid predators and any form of disturbance.
- Village weavers are high social birds, they nests in colonies, and are very active during the breeding season.
- The knowledge on vigilance and feeding behaviour in village weavers is fragmentary and scarce.
- There is a general lack in behavioural studies on birds in West Africa.
- This study was carried out in Amurum Forest Reserve, Jos- East, Plateau State, Nigeria.



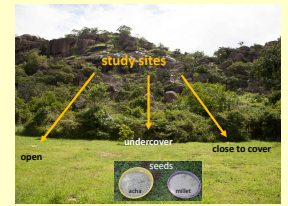
The project was conducted within the APLORI MSc Conservation Biology program 2018.  
 Foto: A. Kinchel

## Aim of this study: To determine the impact of sex, flock size, and location on vigilance in Village Weavers

## Methods



- **Vigilance was defined as the number of head ups**
- Focal sampling technique (**counting**) was used with the aid of a pair of binoculars
- Data was collected on 10./11.07.2018, from 7:00am – 9:00am and 4:00pm – 6:00pm (time of highest activity)
- Three pairs of feeding trays were provided with millet and fonio (acha) grains at three different locations
- The arrival time of a bird/flock was recorded and two individuals (1 male, 1 female) were selected as focal subject for observation
- Data was analysed using excel and R 3.1.2 statistical package; general linear model was used to test the data



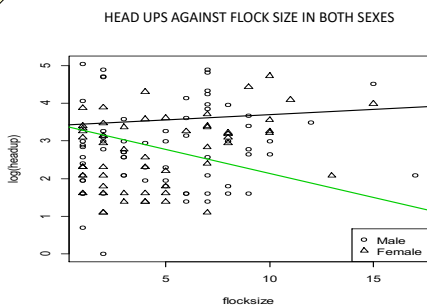
## Results

In total 319 females and 79 males were recorded.

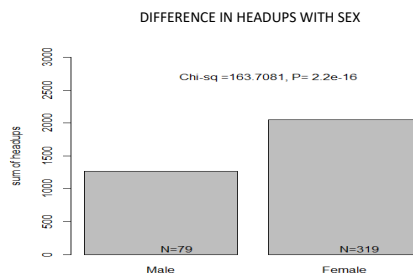
### vigilance decreases with flock size?

### vigilance differs with sex?

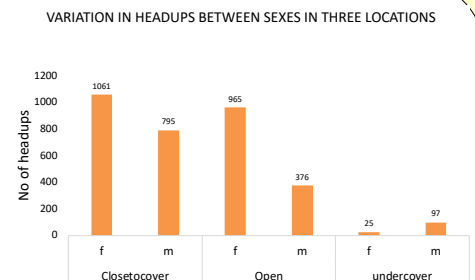
### vigilance differs with location?



Increasing flock size does not significantly affect the level of vigilance in females but it decreases vigilance in males.



Males had lower number of head ups compared to females.



Both sex are more vigilant when they are close to cover than when they are in the open or undercover.

## Conclusion

Females spent more time feeding than the males. This can be attributed to seasonal effects (breeding season) and females need to feed more.

All sex contributed towards vigilance behaviour but there was a decline in number of head ups with increasing flock size in males. This might have been due to individuals expecting other males to watch out for predators or disturbance. That supports the general assumption in bird and mammal studies that vigilance decrease with group size.

However, in females there was no significant change in number of head ups with increase in flock size. Vigilance may also serve other functions, in addition to predation avoidance, including location of food patches discovered by companions which supports our observation that females feed more.

More males were recorded in the undercover location hence, had more head ups than females. In addition, females had more head ups than males in both close to cover and open locations. This can be attributed to more females being recorded in each flock in both locations. Male and female Village Weavers are more vigilant when they are close to cover than when they are in open vegetation or undercover.

Vigilant experiments are classic experiments for studying bird behaviour. But to our knowledge this is the first time that this was conducted (and reported) in West Africa for the Village weaver. Our results in comparison with literature show, that more research is needed to understand the behaviour and therefore the ecological demands of even a common birds species as the Village weavers.