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DOES THE GREEN MILKWEED LOCUST AFFECT BIRD CATCH NUMBERS?

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The Voortrekkers of South Africa regularly have outings at numerous youth camp terrains. Their objective is to educate and get children involved in all sorts of activities, amongst others. One such activity is bush craft, which includes tracking, camouflage and identification of plants and animals, amongst others. I am involved in this activity by giving bird presentations. This includes catching and ringing birds, releasing of birds by children and generally using live birds as a tool to bridge the gap between classroom education and field experience. But the usual dilemma is catching enough birds so as to give each child a chance to hold a bird in the hand and release it.

On the weekend of 5 and 6 May 2012, I arrived at the Magaliesberg NG Kerk youth camp terrain (25° 44'S 27°44'E) at about 21h00. After some discussions and a walk-about, I selected a site to erect 9 x 12-meter mist nets in one long line. The net line was close enough ($\pm 300\text{m}$) to the actual buildings for ease of access but far enough to be out of the way of the movement of children and their activities. A portion of the net line (two nets) were erected between large trees with good grass cover whilst the remainder of the nets were erected on a dirt road with bush / grass cover on one side and large trees in a landscaped area (grass cut short). Nets were erected at night and kept open for the whole night – they were checked until midnight and then from 4h30 onwards.

About 5h00 the following morning, the bush came alive with the dawn chorus, which promised plenty of birds and many species. In fact, the first net round just after dawn provided an African Scops Owl and a Pearl-spotted Owl – I thought that this was going to be a good day for catching birds.

But the total catch for the day was a paltry six birds (Bar-throated Apalis, Dark-capped Bulbul, Cape White-eye (2x), Laughing Dove, Striped Pipit). In fact, the Striped Pipit was caught in a set of two 20-meter mist nets that I erected in a different location about midday. But I did catch plenty of large, green grasshoppers, which were later identified and confirmed as *Phymateus viridipes* of the family Pyrgomorphidae and commonly known as the Green Milkweed Locust or African Bush Grasshopper (Fig. 1). Every net round produced about 10 to 15 grasshoppers on or in each net. Many of them could be removed with little or no fuss. However, some got themselves quite entangled and I ended up removing them bit by bit. Such harsh treatment first elicited the discharge of a clear fluid from the anus, followed by the production of lots of foamy bubbles from the thorax and finally the vomiting of a deep-maroon liquid. These excretions had a very strong and nearly nauseous smell, were sticky to the touch and stuck to my fingers and bird bags, even after thorough washing with detergent. The air in general faintly smelled of these grasshoppers, which became stronger after a net round or after beating trees and bushes that were covered with grasshoppers.

Once I started taking more notice, I saw that the grasshoppers occurred in their hundreds in various species of trees and bushes, and these looked threadbare and tatty with just about most leaves stripped and eaten. As the day grew warmer, more and more grasshoppers swarmed around the area of my mist nets, especially the two mist nets that were located in the bush. By mid-afternoon, I relocated these two mist nets and erected them across a small mountain stream approximately 100m from the main line of nets. Although these two mist nets plus the two 20-meter mist nets caught a handful of grasshoppers, birds were still very elusive. In fact, I noticed very few bird movements in the general area of the grasshopper swarm during the course of the day. Even the late afternoon rush of birds did not materialise as is usually the case.

The remaining seven mist nets were taken down at about 21h00 and erected again on the other side of the camp terrain in an Escom-cleared servitude (“kaplyn”). This servitude was on average about 10 meters wide whilst the adjacent tree canopy reached about



8 meters. Again, the nets were left open for the night. Sunday early morning, the bush again came alive with the dawn chorus, which again promised plenty of birds and many species. The total catch for the day was 19 birds (Arrow-marked Babbler (2x), Bar-throated Apalis (2x), Brown-hooded Kingfisher, Cape Robin, Cape White-eye (2x), Crested Barbet, Greater Honeyguide, Grey-backed Camaroptera (2x), Red-billed Woodhoopoe (2x), Southern Boubou, Tawny-flanked Prinia, Wailing Cisticola and White-throated Robin (2x)), which was exceedingly (3 times) better than Saturday's catch. Grasshoppers were still caught, but this time around only in ones, twos or threes. This was the case for the seven mist nets in the servitude and the two mist nets across the mountain stream. Hundreds of grasshoppers were still present in the shrubs and trees where my mist nets were located the previous day.

Now, the question to be asked: did the presence of these grasshoppers deter the movement of birds throughout Saturday and

result in a very poor catch rate? Was the main deterrent their physical presence and / or their revolting smell? I suspect it to be a combination of both. I think that no respectable bird will sit in a tree that is crawling with poisonous grasshoppers showing aposematic or warning colours (Fig. 1). Sudden movements, such as those caused by wind or beating branches with a stick, or simply the mass swarming of grasshoppers from one bush to another tree elicited a foul smell in the air. For me, the smell was enough of a deterrent not to linger.

Acknowledgements

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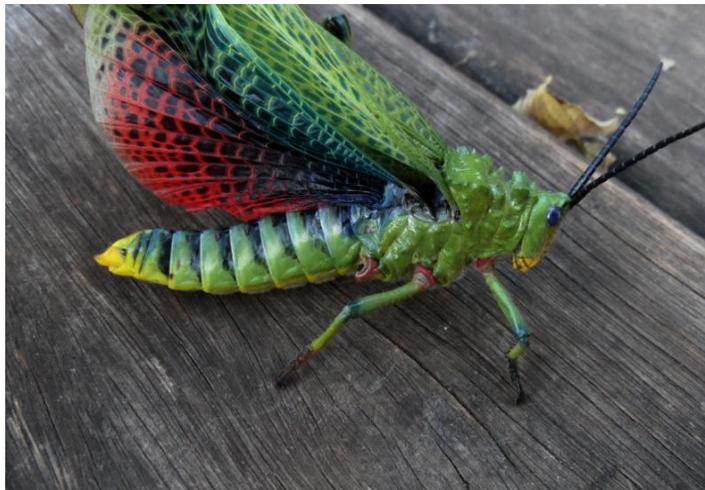


Figure 1 (a, b): Green Milkweed Locust *Phymateus viridipes* showing its aposematic hindwing colouration