

Short communications

On birds and bees

It is perceived anecdotal wisdom in rural Africa that unprovoked attacks by honey bees *Apis mellifera scutellata* are not uncommon. Apiarists are also aware that a sting is accompanied by the release of alarm pheromones to which other bees respond by stinging – often close to the original sting site. The release of more pheromones can stimulate a chain reaction ‘mass attack’. If the victim is unable to escape, lethal results are known, not only for humans, but for cattle, dogs and other animals. Yet what stimulates the first bee to place a sting that starts such a chain reaction? Here I record three instances where birds stimulated bee attacks on nearby people and animals.

A pair of White-eyed Slaty Flycatchers *Melaenornis fischeri*, habituated to human presence, were the core of a group that varied between two and seven (presumably offspring of one or more generations) over a period of 18 yr. Extreme tameness made the pair recognizable, the rest of the group were also very tame from being regularly fed meal worms *Tenebrio* sp. These birds associated as a loose party in which distances between individuals might be 5 m or more.

My hives were kept in a thicket to limit the bees’ ability to see human and animal movement and prevent people from approaching them too closely. On two evenings separated by several years, I was standing close to a hive observing the bees when ‘my’ slatys’ raided it. The flycatchers approached, one at a time through a succession of perches, each getting closer, the last c. 1 m from the hive. From this perch a bird darted out, seized a bee as it landed at the hive entrance and disappeared into the surrounding thicket. More than one bird was involved. The raids were repeated at intervals of initially around 5 min, each making the bees progressively more disturbed. After several attacks, the hive was aroused and a posse of bees pursued each escaping raider into the thicket and out of my sight. Subjectively the periods between dashes to snatch a bee became longer before, on both occasions, the bees, seeing movement, fell upon my nearby dogs and then myself and we fled.

On another occasion while handling cattle under some tall *Eucalyptus* trees, I was aware of a commotion in foliage high above us. A European Honey Buzzard *Pernis ptilorhynchus* flew out of it followed by a train of bees. These had attached their combs to the underside of a branch – an unusual but not unknown departure from placing their hives in hollows. About 15 min later, presumably the same bird flew through the foliage: there was much flapping, and the commotion was repeated briefly before the bird fled with a large piece of comb in its talons, again pursued by many bees. Within the following half hour, this performance was repeated. Shortly after this third attack bees descended en masse, sending people and animals below fleeing.

In these three cases the bees’ victims were spread over relatively wide areas (in the case of the Honey Buzzard they were distributed over an area of 100 m in diameter). In the first instance none was identified by a sting-released alarm pheromone emanating from them. Many were widely separated – men, women, children, chickens, dogs and cattle – and had been initially targeted by an individual ‘angry’ bee. Many were subsequently stung again by bees presumably guided by pheromones released from the first sting. From the victims’ point of view (excluding myself), these bee attacks had been unprovoked.

All bees do not need the stimulus of a pheromone to sting. Abrupt movement within 2m (sometimes more) of a hive entrance will often be sufficient stimulus for a guard bee to sally out and sting the mover. Presumably given their roles in hive defence, such guard bees have an intrinsically lower behavioural threshold for alarm than those employed in other spheres, such as foraging. Yet as many an apiarist has learned, upon an inadvertent loud bang or blow upon their hive, calm bees can attack en masse. Ergo, all bees can be stimulated to attack any animals in the vicinity of their hives in a seemingly directionless manner, and without the guidance of a pheromone. All it needs is a sudden disturbance. I posit that this was what the birds I observed had provided and many 'unprovoked' bee attacks probably have similar origins. Claims that African bees are particularly fierce is overwhelmingly anecdotal, but sufficiently widespread to have substance and suggest that *Apis mellifera scutelata* has a lower alarm threshold than other honey bee races.

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