

Field Notes

Anting Behaviour in Birds in Malaysia

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Introduction

Anting behaviour by birds, the application of ants or other substitutes to the plumage either actively or passively, has been reported since the early 19th century and has been observed in more than 200 species of bird, mostly passerines (Morozov 2015; Hendricks 2016). In active anting the bird will pick up one or more ants or other insects (occasionally inorganic objects) in the beak and swipe it through the plumage, under the tail or wings and on the breast. Passive anting involves the bird using an aggregation of ants, like an ant's nest, and allowing the ants to climb all over the body; often provoking the ants to 'attack'.

The function of anting remains the subject of controversy and debate. Many reasons and hypotheses have been proposed for the activity including (Morozov 2015; Hendricks 2016):

1. Ridding the feather of ectoparasites – formic acid from ants assisting in removing mites or fungi/bacteria in the feathers.
2. Feather grooming – a form of feather maintenance to remove old preen oil and lipids.
3. Functions in moult – assists in stimulating feather growth during moult.
4. Food preparation – the anting process is to remove formic acid from ant's bodies before consuming them.
5. Sensory self-stimulation – that anting offered a sensory pleasure.

The purpose of this article is not to focus on the reason for anting but a collaborative effort to document anting activities seen in birds in Malaysia. It is hoped that this will encourage others to be on the lookout for anting activities and report their observations.

Observations

Masked Finfoot *Heliopais personatus*, Amar-Singh HSS & Connie Khoo

On 02 May 2015 at Perak, Amar observed active anting in a male Masked Finfoot. The Masked Finfoot used a large millipede (*Trigoniulus sp.*) to rub on various parts of the body and wings. The millipede was initially used coiled up and then used 'open' or in fragments. The activity took many minutes and the remainder of the insect was eaten. A short video recording of the activity can be seen here: <https://twitter.com/dramarmoh/status/1233976362001518594> Video grab image in Plate 1. Millipedes secrete hydrogen cyanide from glands in body segments as a defence and may be useful for anting purposes.

This activity has also been observed by Connie Khoo (Plate 1) in the same bird on 02 June 2014 and 27 December 2014. She has seen the bird use a millipede and an unidentified insect for anting.

This observation of anting for the Finfoot is possibly one of the first documented.



Plate 1: Active anting by a male Masked Finfoot using a millipede

Banded Woodpecker *Chrysophlegma miniaceum*, Lee-Fung Chai, Samuel BL Ong & Sein-Chiong Chiu

On 29 October 2023 at Taman TAR, Selangor, Lee-Fung observed passive anting in a male Banded Woodpecker (Plate 2). The woodpecker was allowing ants to crawl all over its body for a good 20 minutes. This is the second time Lee-Fung has seen this behaviour for this species; the other occasion was on 15 May 2021 also at Taman TAR, Selangor.

On 20 October 2021 at about 11 am, Samuel Ong saw a Banded Woodpecker covered with ants on the road up from the Gap to Fraser's Hill (Plate 2). The ants were actively crawling about the woodpecker, but the woodpecker was not in any distress and seemed to be quite comfortable with the ants on it. However, before he could observe the relationship between the ants and the woodpecker, it flew off.

Chiu saw a pair of Banded Woodpeckers on 30 April 2022 at Ulu Chepor, Perak that intentionally visited an Asian Weaver Ants *Oecophylla smaragdina* (locally known as Kerangga) nest in a Jackfruit (Nangka) tree *Artocarpus heterophyllus* (Plate 3). The pair was taking turns at anting. A video recording showed that the ants were very agitated and that the birds were allowing many ants to crawl all over its body. The birds also appeared to be picking up ants to rub on the body as well as feed on them. This observation suggests a combined passive and active anting activity with feeding. A video recording of the activity can be seen here: <https://youtu.be/nHBIFc4u21I>

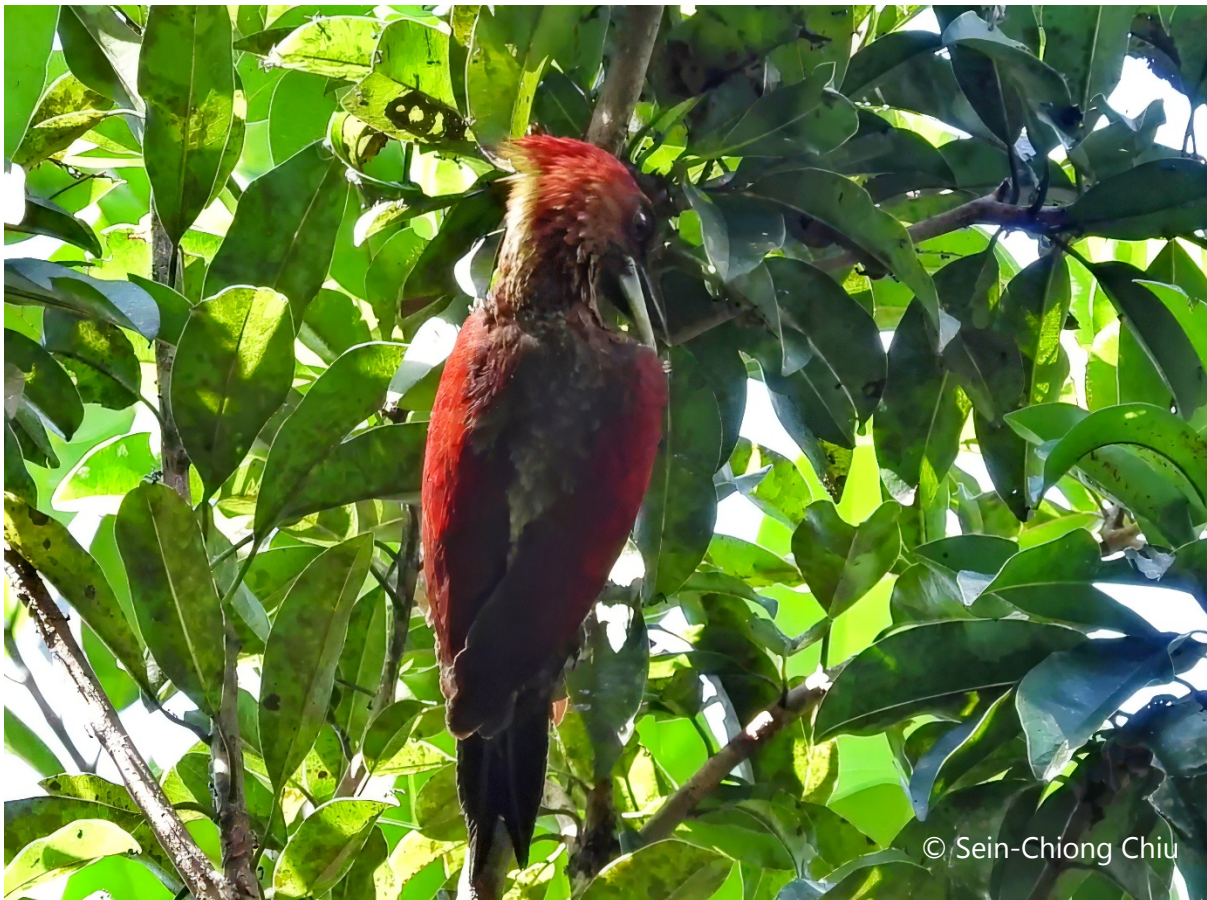


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Plate 2: Passive anting by a Banded Woodpeckers



© Sein-Chiong Chiu

Plate 3: Passive and active anting by a Banded Woodpecker

Buff-rumped Woodpecker *Meiglyptes tristis*, Lee-Fung Chai & Sein-Chiong Chiu

On 3 Aug 2023 at Lenggong Forest, Johor Lee-Fung observed a male Buff-rumped Woodpecker actively catching (not sure if it was eating) ants (Plate 4). It would grab the ants with the foot and then use its beak to pick them up one after another. She was not sure if it ate the ants or it was anting. It continued to repeat this for about 5 minutes.



Plate 4: Possible anting by a male Buff-rumped Woodpecker

Chiu observed a pair of Buff-rumped Woodpeckers at Merapoh, Pahang, on 20 August 2023, using their beak to obtain sap from a tree for anting (tree species unknown). In a 37-second-long recording, multiple episodes of sap application to various parts of the body were observed. The pair were taking turns at using the same branch to get sap for anting. During the observation an ant passed by, but it was picked up and tossed away and not used for anting. Plate 5 is a composite video grab showing the activity.

Sunda Pygmy Woodpecker *Yungipicus moluccensis*, Sein-Chiong Chiu

On 08 June 2023 Chiu observed an adult Sunda Pygmy Woodpecker, that was nesting, perform anting for 5 minutes (video recordings; Plate 6). Although the bird was predominantly eating the ants and the ant eggs, it also was picking up ants to rub on the tail, chest and underbelly. The bird would intermittently pick up ants and place them on its back. The identity of the black ants is not known. The activity was concluded by the bird flying back to the nest hole entrance to feed the chick. This observation again suggests a combined passive and active anting activity with feeding. A video recording of the activity can be seen here: <https://youtu.be/8qoH6QjB-gQ>



Plate 5: Video grab composite image showing female Buff-rumped Woodpecker 'harvesting' sap and using it for active anting

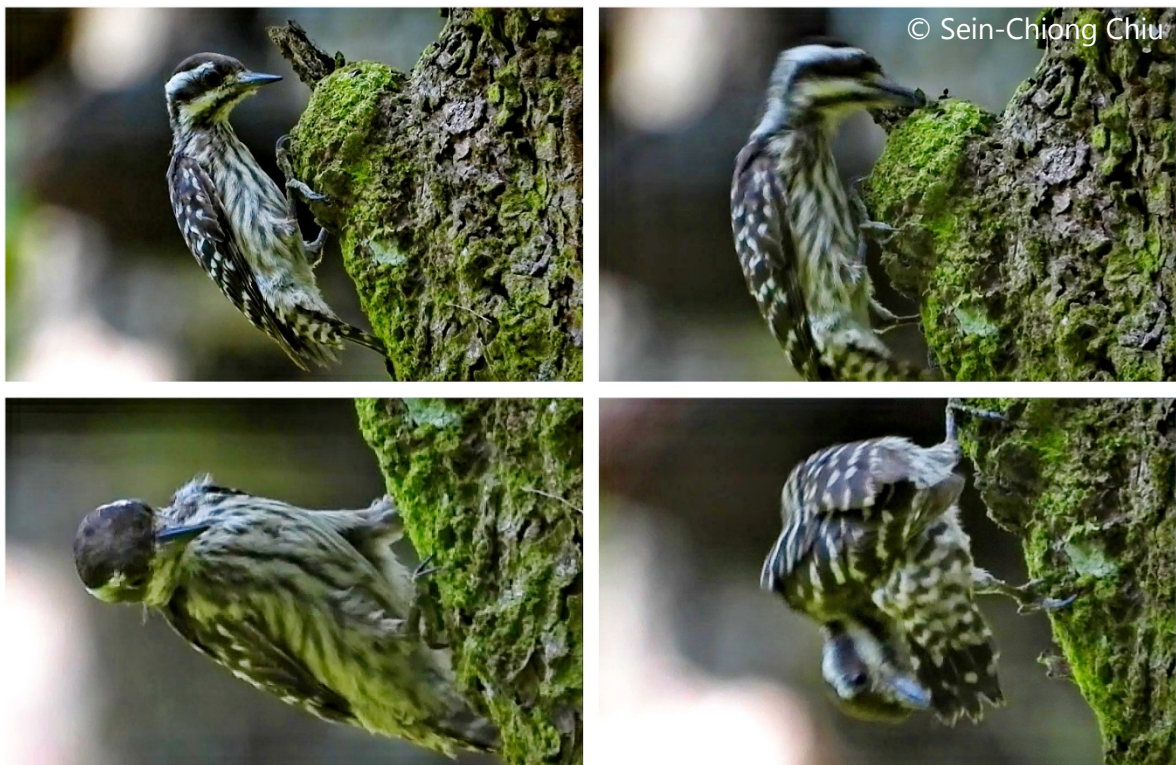


Plate 6: Composite video grab image of passive and active by Sunda Pygmy Woodpecker
Common Myna *Acridotheres tristis*, Kim-Chye Lim

Kim-Chye has observed anting behaviour by the Common Myna on three occasions (Kim-Chye Lim 2005). Twice he observed the typical behaviour of birds picking up Asian Weaver Ants *Oecophylla smaragdina* to place on the body and under the wings. On 10 September 2005 he saw a Common Myna at Taiping, Perak landing near an Asian Weaver Ant nest which resulted in ants swarming all over its body. The bird then flew to a nearby lamp post where it continued anting but also picked up and ingested several of the ants. The Common Myna returned to the ant nest a second time. After about a minute, it flew to a utility cable where it continued anting and was seen opening and closing one wing after the other, possibly to allow the ants access to the underside of the wings. It was again seen picking off ants from its legs and ingesting them.

Blue-winged Leafbird *Chloropsis cochinchinensis*, Sivapragash Periannan & Vincent Chow

On the morning of 06 May 2021 Siva and Vincent were traveling along the access road of the Panti Bird Sanctuary, Kota Tinggi. With cameras ready, they scanned the trees and shrubberies on both sides of the road for birds. Just about 3 to 4 km into the sanctuary, they spied a small group of Blue-winged Leafbirds foraging among the *Clidemia hirta* bushes which were decked with inviting purplish berries. Behind these bushes was also a common small tree *Macaranga javanica*, which when in season, also produces reddish berries that attract scores of birds and small mammals like squirrels. They stopped the car, less than 3 meters away, from birds which were not feeding but were acting strangely and were preoccupied with something else, based on their behaviour.

Siva videoed a female Blue-winged Leafbird. In video recordings lasting 77 seconds, the bird was seen taking 17 small ants and rubbing them on the wing, underside of the wing and tail. Most episodes were a single use of the ant and lasted two to three seconds. The ants were not eaten. Plate 7 is a composite video grab showing one episode and a close-up of an ant in the beak. One of the video recordings can be seen here:

<https://www.facebook.com/watch/?v=301736708154168>

Vincent observed a male Blue-winged Leafbird. The bird was hopping among the *Macaranga* branches searching and picking up the ants using its beak and appeared to be inserting the ants under the wing and tail feathers (see Plate 8). This was repeated several times and made Vincent marvel at how each ant was handled deftly by the bird without injuring the ant. Vincent has seen similar behaviour by the same bird species previously at Panti.

The ants used on this occasion were the Asian Weaver Ants.



Plate 7: Video grab composite image showing active anting by a female Blue-winged Leafbird



Plate 8: Composite image showing active anting by a male Blue-winged Leafbird

Pin-striped Tit-Babbler *Mixornis gularis*, Amar-Singh HSS

Amar observed active anting by a Pin-striped Tit-Babbler on 16 November 2012 at Ipoh, Perak. A pair of Pin-striped Tit Babblers were foraging when one of them captured a small black beetle. Instead of eating it immediately, it retained it in the beak for some time, and used it as part of the preening activity (Plate 9). The beetle was eventually eaten.



Plate 9: Composite image showing active anting by a Pin-striped Tit-Babbler

Discussion

This attempt at documenting anting behaviour shows that it is not uncommon and occurs in a wide range of birds; both passerine and non-passerine birds. It is interesting to note that while anting behaviour is thought to be rare in non-passerine birds (Morozov 2015; Hendricks 2016), we have a number of observations of woodpecker species and a Finfoot. One of the observations shows the use of sap instead of ants for the activity.

Once birdwatchers and photographers are aware of anting activity, they can often spot it as part of 'preening behaviour'. It would be important to both report such observations as well as study them to better understand the behaviour. Some of our observations suggest a combined passive and active anting activity with concomitant feeding.

References

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Citation: Amar-Singh HSS, Lee-Fung Chai, Sein-Chiong Chiu, Sivapragash Periannan, Vincent Chow, Kim-Chye Lim, Connie SY Khoo & Samuel BL Ong. (2024). Anting Behaviour in Birds in Malaysia. *Malaysian Bird Report*. Volume 1/2024, March 2024: pg. 5-12.