

Bird massages reduce stress for both giver and taker

July 28 2011, By Tamera Jones



Green woodhoopoe.

As anyone who's had one knows, a good massage does wonders for reducing tension. This isn't just the case for us; it's also true for apes, monkeys and even birds.

And while it's better to be on the receiving end, the latest study suggests that green woodhoopoes' [stress levels](#) go down both when they give a good preen, and when they get one.

But how much the birds' stress levels drop also depends on their place on the social ladder: woodhoopoes lower down the pecking order get more out of being groomed than those higher up.

"It may be that subordinates are more likely to be the stressed ones in a group. So if they get a massage from a usually threatening dominant

individual, it's particularly relaxing, because it means they're accepted and so feel secure," says Dr. Andy Radford from the University of Bristol, author of the study, published in [Biology Letters](#) today.



The green woodhoopoe preening.

Until now, most researchers have focused on the role of grooming in [monkeys](#), [gorillas](#) and other primates, even though scientists have reported since the 1960s that birds preen each other. "Until recently, people thought that, in birds, this behavior was only important for cleanliness," Radford says. "And, in all animals, they've tended to look at the grooming of others just from the recipient's point of view."

Indeed, this is only the second study to show that both the donor and the recipient benefit from grooming either during or immediately after. The only other study – published last year – showed that grooming others reduces stress in crested black macaques. Other studies have tended to

look at the long-term benefits for the donor.

"Around nine to ten per cent of all birds live in close-knit, stable groups, just like primates. So, I thought there must be social functions to preening behavior," says Radford.

To test his idea, Radford studied 20 groups of green woodhoopoes near Morgan's Bay, Eastern Cape Province in South Africa and noted the birds' behaviour after bouts of grooming.

Green woodhoopoes live in small groups, which include a dominant breeding pair, and up to six non-breeding subordinates. The subordinates' job is to help the dominant pair raise their young. All birds in a group preen each other, with sessions focused on either the birds' heads and necks, or on other body parts.

"These [birds](#) offer a good opportunity to look at whether or not grooming reduces stress levels, because they can't reach their own heads and necks," explains Radford. 'If grooming was solely for cleanliness, after getting a head and neck [massage](#), you might expect them to continue to preen their bodies to get rid of excess parasites.'

Instead, Radford found that if a green woodhoopoe has preened another bird's neck and head, the recipient still spends time relaxing.

The trouble is, Radford has to infer that the birds' stress levels fall from this behavior, "because measuring their stress levels directly would itself be stressful for them," he explains.

"I can't say 100 per cent that this means there's been a reduction in stress, but I'm pretty convinced this is what it's showing," he adds.

These results suggest that social functions of grooming are not just

confined to [primates](#) or creatures with higher intelligence. Rather, grooming or preening behavior is common where there are complex social structures.

The study will also help scientists piece together why sociability evolved and how it's maintained over time.

More information: Andrew N. Radford, Post-allogrooming reductions in self-directed behaviour are affected by role and status in the green woodhoopoe, *Biology Letters*, published Wednesday 27 July 2011, [doi:10.1098/rsbl.2011.0559](https://doi.org/10.1098/rsbl.2011.0559)

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