The red woodpecker is our very own

The latest findings published in the prestigious ‘The Auk – Ornithological Advances’ journal of the American Ornithologists’ Union

By Kumudini Hettiarachchi

It was not a case of the "hota petalema" (the beak getting entangled) when the Keralla pecks the banana bark, for the zoologists who peered closely at the wide and varied plumage of this beautiful bird.

Instead of getting entangled in a messly mission, these zoologists have through the study of the feather, morphology and genes of the ubiquitous Keralla (Red-backed Woodpecker or Dinoipus psarodes) found aplenty in home gardens, come up with an important finding.

"The Red-backed Woodpecker is a species endemic to Sri Lanka," says Research Scientist in Evolution & Molecular Biogeography, Dr. Sampath Seneviratne who led the team which established this fact.

Sri Lanka now has four species of woodpeckers from two strains. In both strains (Chrysococcyx or Greater Flameback and Dinoipus or Lesser Flameback), the red form is endemic to the country, the Sunday Times learns.

"This makes Sri Lanka unique, for it is the only country which has red woodpeckers, while in the rest of the world they are gray woodpeckers," points out Dr Seneviratne.

This finding on the Red-backed Woodpecker by Saminda P. Fernando of the Avian Evolution Node, Department of Zoology, University of Colombo; Darren E. Irwin of the Biodiversity Research Centre & Department of Zoology, University of British Columbia, Vancouver, Canada and Dr. Seneviratne has been prominently published recently in the prestigious ‘The Auk – Ornithological Advances’ of the American Ornithologists’ Union.

The Sunday Times learns that this is considered the No. 1 journal on ornithology in the world and it is a signal honour not only for the researchers but also for the country with the publication of the article titled, "The phylogenetic and genetic analysis support distinct species status of the Red-backed Woodpecker of Sri Lanka".

It was in 2013 and 2014 that the researchers, having sought and been granted mandatory permits by the Department of Wildlife Conservation, armed with special nets set out for field sampling along a 430 km transect in both the southern and northern sectors, inhabited by the Red-backed Woodpecker and the Golden-backed Woodpecker respectively.

"We used optical and acoustic cues," says Dr. Seneviratne, explaining how when a bird was located they used a decoy, a life-size plastic replica of a woodpecker to entice it to fly into the net.

While geo-referencing the capture site, the team had studied the birds' morphology (size, shape and colour) and plumage (feathers), determined their sex, taken a set of photographs and obtained blood samples to check out the genes (basic physical and functional unit of heredity). The males have red crowns and females have white spots on the forward part of their crowns, it is learnt.

Before Dr Seneviratne dips into the research, he poses the question: How many endemic birds does Sri Lanka have? In typical multiple choice structure he provides four answers – 21 species, 33 species, 34 species or 47 species.

What is the right answer, he asks, explaining that whatever the choice is, it is "unfortunately" based on just opinions of various people. He points out that there had not been a single scientific study to test the validity of assertions of any of Sri Lanka's endemic birds until the recently published research on the Red-backed Woodpecker.

Looking at a questionable cluster of woodpeckers in Sri Lanka, the research team had objectively claimed that the Red-backed Woodpecker is the country's newest endemic species of birds.

The study explains that the woodpecker genus Dinoipus has historically consisted of five species from South and Southeast Asia - D. rutilis (Olive-backed Woodpecker); D. shorti (Himalayan Flameback, Woodpecker); D. javanensis (Common Flameback Woodpecker); D. everetti (Palawan Flameback Woodpecker) and D. benghalensis (Black-rumped Flameback Woodpecker), all commonly called flamebacks due to their golden-coloured mantle, scapular and folded wings.

The Black-rumped Flameback Woodpecker consists of six subspecies or races, distributed across South Asia with two in Sri Lanka - D. b. affinis (Golden-backed Woodpecker) in the north and D. b. psarodes (Red-backed Woodpecker) in the south.

However, the study has shown that the Red-backed Woodpecker is not a subspecies of the Black-rumped Flameback Woodpecker, but a 'valid' species on its own.

Many colour variations have been observed within the Sri Lankan forms and the red-backed form had been considered as endemic to Sri Lanka in the 1800s. Later, however, it has been put under a subspecies of the yellow bird found in South Asia which is the Black-rumped Flameback Woodpecker. Authors up until this study have continued to adopt the same taxonomic treatment of the two Sri Lankan forms.

Getting down to scientific detail, Dr. Seneviratne explains that in recent times a taxon is a distinctive entity with a body shape, size and particular colour pattern backed by a unique genetic signature.

The study points out that all Red-backed Woodpeckers in Sri Lanka have red crowns and plain black napes and upper mantles, but their backs have two predominant color types - crimson-red and olive-yellow. This is while the intermediate color forms range from golden-yellow to orange.

The Red-backed Woodpecker in the extreme south has crimson-red shading in the feathers used in flight, the study states, adding that the amount of black and white plumes on the facial region and upper wing covers (shoulder) shows slight variation along the north-south transect.

The northern (Dry Zone) birds of all colour types have broader white mustaches, while those in the south (Wet Zone) have narrower white facial stripes, hence darker faces. The Red-backed Woodpecker in the south is also slightly larger than the Golden-backed Woodpecker, its cousin in the north.

According to the study the Red-backed Woodpecker has a bigger beak than the Golden-backed Woodpecker, possibly to better excate the thick barks in the trees in the Wet Zone forests which are much bigger. The darker plumage coloration and the longer beak are general patterns shown by the birds in the Wet Zone of Sri Lanka compared to their Dry Zone counterparts. This fits the general pattern of higher humidity being associated with darker and bigger individuals.

The Red-backed Woodpecker even though found in the Dry Zone as well is spotted closer to water bodies such as tanks and rivers scattered in abundance in this area. This may be indicative of its preference for humid habitats compared to its Dry-Zone counterpart, the Golden-backed Woodpecker.