



A Red-billed Woodhoopoe.

W. TARBOTON



To study the thermal benefits of cavity-roosting, a flock of Red-billed Woodhoopoes was temporarily kept in captivity.

M. DU PLESSIS

Risking death to keep warm

Anyone who has spent time in African woodlands will be familiar with the cackling of Red-billed Woodhoopoe groups as they noisily settle their territorial differences. In a study that has spanned the best part of two decades in the Eastern Cape Province of South Africa, much interesting information has been gathered on the biology of this species. Over the past 18 years, Morné du Plessis and his co-workers have kept careful records of the births, lives and deaths of almost all individuals in more than 50 woodhoopoe groups in the Komga district.

When birds live in groups, as woodhoopoes do, there are both advantages and disadvantages. For example, the greater number of eyes means that they are more likely to spot approaching predators but, equally, the increased activity associated with larger groups may serve to attract more predators.

One of the most interesting aspects of woodhoopoe biology is their extreme dependence on roosting in cavities at night. This behaviour at first seems surprising because predation within roost cavities by nocturnal predators, especially genets and driver ants, appears common. The fact that woodhoopoes do not roost in ostensibly safe open sites, such as thorn-covered branches of acacias, has prompted researchers to suggest that these birds sleep in tree cavities because they cannot maintain their normal body temperatures when exposed to low night-time temperatures.

This indeed seems to be the case, particularly when some group members are in poor physical condition. During the cold winter months, some birds (especially immatures) have difficulty in finding sufficient food to meet their daily energy requirements. The energy

savings gained by roosting in a tree hole huddled up with other group members can reduce an individual's nocturnal energy expenditure by a third or more. Among woodhoopoe adults at one of the Eastern Cape study sites, results consistently indicated that individuals living in small groups suffered high mortality during the winter months, but this was not the case for birds living in large groups.

As woodhoopoes have slender, decurved bills and are unable to excavate their own roost cavities, they rely on finding disused woodpecker/barbet holes or natural cavities in trees. In an experiment to quantify the number of cavities available in various territories, Du Plessis blocked entrances to roost cavities and then recorded the subsequent behaviour of woodhoopoe groups. The birds always found alternative tree hollows in which to roost within

their territories, although they used cavities with progressively larger entrances. Large cavities are not optimal for these birds because they increase the risk of nocturnal predation and probably decrease the insulating properties of the roost.

These findings are a good example of the value of long-term information about individuals of known age and parentage; without such a foundation it is impossible to unravel some of the more intricate and interesting patterns in nature. □

Visit the FitzPatrick website:
<http://www.uct.ac.za/depts/fitzpatrick>

Percy FitzPatrick Institute of African Ornithology,
University of Cape Town,
Rondebosch 7701,
Cape Town, South Africa.
Phone (021) 650-3290;
fax (021) 650-3295;
e-mail birds@botzoo.uct.ac.