THE WHITE-CHESTED ALETHE *ALETHE FUELLEBORNI* IN TANZANIA

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Although the White-chested Alethe *Alethe fuelleborni* is a common inhabitant of most of the montane forests in eastern Tanzania, northern Malawi and north-eastern Zambia, comparatively little is known about its general biology. In this paper we present some new information on its distribution, subspecific limits, seasonal movements, food and feeding in Tanzania. We also give a description of the nest and eggs of this species. These observations were made during a number of visits to the forests of eastern Tanzania between 1980 and 1984.

DISTRIBUTION

The White-chested Alethe occurs in the forests of eastern Tanzania (see Fig. 1) from the South Pare Mountains and the Usambara Mountains south to Mt Rungwe (Britton 1980, 1981). We observed this species in the Usambaras, Ulugurus, Uzungwas and on Mt Rungwe. It also occurs in the forests of northern Malawi at Uzumara, Nyankhowa, the Nyika Plateau and the Misuku Hills (Benson & Benson 1977) and in adjacent Zambia on the Nyika Plateau (Benson *et al.* 1977). An isolated subspecies, *xuthura,* has been reported from a coastal forest near Sofala (formerly Beira) in southern Mozambique and from the nearby Gorongosa Mountain (Clancey & Lawson 1969).

The White-chested Alethe has generally been considered a resident of montane forests (Hall & Moreau 1970, Benson *et al.* 1971, Britton 1980) with an altitudinal range in Tanzania from 900 to 2600 m (Britton 1980), in Zambia between 1800 and 2100 m (Benson 1971) and in Malawi from 1830 to 2200 m (Benson & Benson 1977). Records of the species at 1380 m in the Misuku Hills in Malawi in August, however, were thought to indicate some downward, off-season movement (Benson & Benson 1977). The birds found in coastal forests in Mozambique in June might have been migrants from Gorongosa Mountain. In recent years there have also been a number of low altitude records of White-chested Alethes from Tanzania. In the East Usambaras it is resident down to 500 m (S.N. Stuart, pers. comm.). In the Kimboza Forest in the eastern foothills of the Uluguru Mountains it has been recorded at 250-300 m in June and July (Stuart & Jensen in press) and in the Mwanihana Forest on the north-eastern escarpment of the Uzungwa Mountains it is common down to 400 m in August (pers. obs.). In Magombera Forest, at 300 m to the east of Mwanihana Forest, it has been recorded in September (S.N. Stuart, pers. comm.) and in the Chita Forest in the southern part of the Uzungwa escarpment it was found to be common and breeding (see below) at 750 m in October and November.

It is clear that in Tanzania this species is not restricted to montane forests but occurs at intermediate altitudes in certain

localities down to 500-750 m throughout the year. The records from below 500 m, however, are all from the cold season between May and August and its occurrence at these altitudes is therefore probably seasonal. This hypothesis is supported by the apparent lack of White-chested Alethes in the Kimboza Forest when mist-netting was conducted at this site at the end of November 1984 (pers. obs.).

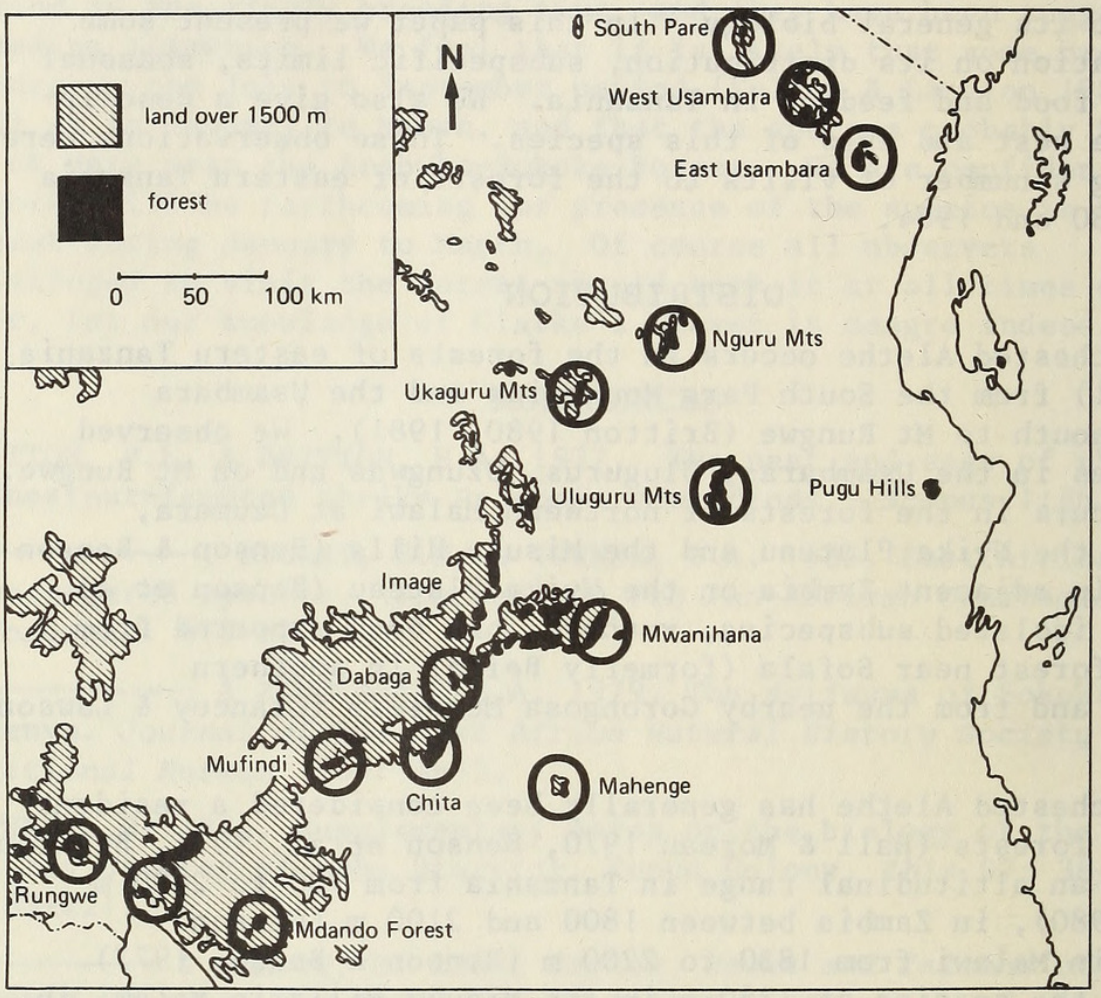

Fig. 1. *The distribution of the White-chested Alethe in Tanzania. Note that the Uzungwa Mountains comprise the area from Image, east to Mwanihana, south to Chita and Mufindi.*

SUBSPECIATION

Two subspecies are known from Tanzania. The nominate race was described from southern Tanzania between the Poroto Mountains and Tandala by Reichenow (1900). Reichenow (1905) described *usambarae* from the West Usambara Mountains. Britton (1980) gives the range of the nominate race in Tanzania as Mt Rungwe, the Poroto and Livingstone Mountains. This form also occurs in Malawi and Zambia. All other populations of the White-chested Alethe in Tanzania are usually referred to *usambarae* (Ripley & Heinrich 1969, Britton 1980).

Reichenow (1905) in his description of *usambarae*, stated that it is separable from the nominate form by its more olivaceous, less

brown mantle. Clancey & Lawson (1969) and Ripley & Heinrich (1969) also noted the nominate race has greyish apical margins to the chest and breast feathers, giving a scaly appearance, in contrast to the almost pure white underside of *usambarae*. Clancey & Lawson (1969) give wing lengths of 102-108 mm for the nominate race and 112-120 mm for *usambarae*.

Our examination of a large number of museum specimens and living birds from many localities in both Tanzania and northern Malawi has revealed a more complex situation than that previously described. With regard to the colour of the mantle and back, we found that in birds from the Njombe-Mt Rungwe area and northern Malawi (i.e. the nominate race) brown seems to predominate while most birds from the Uzungwas, Ulugurus and Usambaras tend to be more olivaceous. However, in several populations, especially *usambarae*, we found a large amount of individual variation in mantle and back colour. This is, therefore, an unreliable character for separating the two subspecies.

We have attempted to verify that the two subspecies can be separated on the wing length. We obtained figures of 110-115 mm (n = 17) for the nominate race (*contra* 102-108 mm given by Clancey & Lawson (1969)) and 102-120 mm (n = 129) for *usambarae* (*contra* 112-120 mm given by Clancey & Lawson (1969)). There is, therefore, a large overlap in the wing length of the two subspecies. We also found that the wings of the males average 2.0 mm longer than those of the females (n = 33 males and 22 females).

In Table 1 we have given the mean wing length and weight of alethes belonging to the nominate race (birds from Njombe, Rungwe and northern Malawi) and of birds from a number of other localities in eastern Tanzania.

Table 1. *Wing lengths and weights of White-chested Alethes*

Localities	Mean wing length (mm)	Weight (g)
Usambara Mts	110.0 (n=22)(13m & 9f)	54.8 (n=13)
Uluguru Mts	110.9 (n=14)(5m & 5f, 4 unsexed)	53.6 (n= 4)
Mwanihana	110.8 (n=26)(all unsexed)	52.3 (n=24)
Dabaga	108.1 (n= 7)(6m & 1f)	49.3 (n= 7)
Chita Forest	108.9 (n=49)(all unsexed)	50.8 (n=54)
Kigogo Forest	108.0 (n=10)(all unsexed)	49.0 (n=10)
Nominate birds	106.9 (n=16)(9m & 7f)	45.3 (n=12)

m = male(s), f = female(s)

It can be seen from the table that instead of a sudden change in size, the variation is clinal and the birds tend to have longer wings and heigher weights towards the north of the range. We detected no weight difference between males and females.

The grey margins to the chest and breast feathers in nominate birds, *contra* the almost pure white underside of *usambarae* seems to be the only valid character to segregate the two subspecies. In a comparison of 38 museum specimens from Njombe, Rungwe, the Uzungwas, the Ulugurus and the Usambaras, we were able to identify the nominate birds by their scaly breasts. However, we noted some weak scaling on a few specimens from the Usambaras and Dabaga. It is, therefore, with some hesitation that we uphold the two subspecies of the White-chested Alethe in Tanzania.

BREEDING

There is only one previous breeding record from Tanzania, that of a nest in montane forest in the West Usambara Mountains on 11-12 December 1976 (Carter 1978). This nest was situated 4-5 m from the ground in a tree, but because it could not be examined closely, no detailed description of the nest was given and the eggs remained undescribed.

On 23 October 1984 we found an active nest of a White-chested Alethe in the Chita Forest in the Uzungwa Mountains. The nest site was at 750 m inside primary forest on a gentle slope about 50 m from a small stream. The forest was fairly low with the canopy at about 20 m. The understorey was open and dominated by young trees 2-4 m in height, and ground plants were almost entirely absent.

The nest was positioned on top of a stump, 1.8 m above the ground. It was made of green moss and lined with fine rootlets. The cup measured 8 cm in diameter and was 5 cm deep. The nest contained two pale green eggs with brown to dark green spots. They measured 25.5 x 18.2 mm and 26.9 x 17.7 mm.

In addition to these two records of nesting, birds in breeding condition have been collected in eastern Tanzania between October and March (Ripley & Heinrich 1969), in northern Malawi in late October (Benson & Benson 1977) and in Zambia in November (Benson *et al.* 1971). This suggests that the White-chested Alethe follows the general trend among insectivorous forest passerines by breeding during the rains.

FOOD AND FEEDING

The White-chested Alethe is usually a solitary feeder which appears to seek most, if not all of its food on the ground. The food has been given as beetles, ants and berries (Benson 1937, Mackworth-Praed & Grant 1960). Our examination of 12 stomach samples confirmed that insects, in particular beetles, constitute a large proportion of the diet. The birds also take millipedes, snails, worms and small amphibians. Ants were found in two of the samples. In one of the samples there were a few ants and some ant larvae while the other was packed with driver ants *Dorylus* sp. Like many ground-feeding forest birds, the White-chested Alethe is often seen near driver-ant swarms. It has, however, been the impression that the birds feed on the insects which try to escape

from the ants, rather than on the ants themselves (Oatley 1970, Willis & Oniki 1978, Willis 1981). In eastern Tanzania only the Red-tailed Ant Thrush *Neocossyphus rufus* is known to feed specifically on driver ants (Sclater & Moreau 1933, pers. obs.), but it appears that at least occasionally the White-chested Alethe does the same (only a very few fragments of other insects were present in this sample).

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