

NYASALAND AND NORTHERN RHODESIA THE NYIKA PLATEAU AND ITS FAUNISTIC SIGNIFICANCE

By C. W. BENSON

There has this year been correspondence in the *London Times* about the possibility of creating a national park out of part of the Nyika Plateau; notably the letter from the Secretary of the Fauna Preservation Society, published on 6th April, 1953, and that from Sir George Stapledon on 10th April. The information below consists of a general account of the plateau and some more specialized notes, derived mainly from knowledge of the birds, with a view to indicating the faunistic isolation of the area.

The total area of the Nyika Plateau (it should not, of course, be confused with the low-lying, semi-desert country between Lake Rudolf and Teita, in Kenya Colony) is approximately 1,400 square miles, at a general altitude of 7,000–8,000 feet, between 10° 20' and 10° 55' south and 33° 34' and 34° 04' east. It is mostly in northern Nyasaland (drainage to Lake Nyasa), but with about 150 square miles in Northern Rhodesia (drainage to the Luangwa River). Between June and August the temperature at night must not infrequently fall below freezing point. The annual average rainfall on the eastern escarpment may be as much as 70 inches, and probably tends to decrease somewhat to the westward. The general direction of the rain-bearing winds seems to be from the south-east. Most of the rain falls between December and March, when mists enveloping the whole plateau are frequent.

The general character of the high plateau is undulating short grasslands (reminiscent of the downlands of parts of southern England), with perennial clear streams in the hollows, arising in spongy, lush bogland. Here and there are small clumps of evergreen rain-forest. Such forests are much more extensive on the steeply sloping eastern escarpment, at an altitude of 5,500–7,000 feet, and likewise in the west, in Northern Rhodesia. The surrounding lower country, at a general altitude of 3,500–5,000 feet, is of quite a different type, consisting mainly of the *Brachystegia* woodlands which are so prevalent in this part of Africa. In the north-east, however, the escarpment descends abruptly to the Lake Nyasa littoral which is below 2,000 feet. When the atmosphere is clear and there is no mist, or when it is unpolluted by the smoke of bush-fires, as it is with the advance of the dry season, the views from the edge of the high plateau

are magnificent. Especially is this true on the north-eastern side, whence there is a panorama of the north end of Lake Nyasa, with the high mountains of the far side of the lake in the background. But in the interior of the plateau one has almost the feeling of being in another continent, so great is the contrast with the surrounding lower country. Shortly before the rains the grasslands are in parts carpeted with a great variety of flowers.

The plateau is practically unsettled by man, except for a few very small habitations of Africans of the primitive Poka people in the more sheltered valleys. The surrounding lowlands, however, contain a considerable population. Probably the first European to visit the plateau was Richard Crawshay, in 1895, after whom a race of francolin is named. Crawshay had the official title of Consul for the North of Lake Nyasa. There is a brief account of his career in Sir Harry Johnston's book, *British Central Africa* (1906), p. 94.

Alexander Whyte visited the plateau during May, and again in June–July, 1896, to make general zoological and botanical collections. Whyte had been brought out to British Central Africa, as it was then known, at the instance of Sir Harry Johnston, the Commissioner and Consul-General of the B.C.A. Protectorate, himself a traveller and naturalist of wide interests.

The next European to visit the area seems to have been J. McClounie, who succeeded Whyte, with the official title of Head of the Scientific Department. A paper by him, "A Journey across the Nyika Plateau," was published in the *Geographical Journal*, vol. 22, no. 4, October, 1903, pp. 423–437. The Nyika is dealt with on pp. 430–5, the remainder of the paper dealing with lower country to the north and south. McClounie mentions (pp. 431, 435) zebra, roan, klipspringer and partridge as being common, and zebra as very tame. None of these remarks are applicable to-day, except that the partridge or francolin named after Crawshay is still common. Zebra, roan (and also eland) no longer exist in very large numbers, but are of regular occurrence. Klipspringer still occur, but could never have been more than strictly localized, since the rocky terrain which they require is not generally distributed. Near the top of p. 432 the call of a night bird is described. This is clearly referable to the Abyssinian nightjar (*Caprimulgus poliocephalus*), although it was not collected in northern Nyasaland until nearly forty years later. Natural history specimens were collected during the expedition. In the British Museum (Natural History)

there are some birds labelled as collected by Sir Alfred Sharpe (who succeeded Sir Harry Johnston in 1897) on the Nyika in 1902. These were probably collected during McClounie's journey. So far as I am aware, Sharpe never visited the Nyika.

After 1902 the Nyika seems to have received no attention from naturalists for some thirty years. Indeed, it was never visited by any European, except for an occasional itinerant official or missionary (the Livingstonia Mission had been established in its present site, to the east of the plateau, during 1894–5). The Rev. W. P. Young, of the mission, collected various birds during 1930–8, and there is a pleasant general account of the plateau by him in the *Nyasaland Journal*, vol. 6, no. 1, 1953, pp. 45–52. On page 50 he mentions seeing a cheetah, a very uncommon animal in this part of Africa.

L. J. Brass, a member of the Vernay Expedition to Nyasaland in 1946, spent ten days on the plateau, collecting botanical specimens. An interesting general account of his visit was published in the *Journal of the New York Botanical Gardens*, vol. 49, June, 1948. This is accompanied by several photographs, including one of the relic patch of juniper forest, the well-known pencil cedar of Kenya (*Juniperus procera*), which does not seem to be otherwise known any further south than northern Tanganyika Territory, e.g. at Mt. Hanang. Brass suggests that the eastern side of the plateau, at least, must originally have been covered in forest, and that destruction by human agency must have contributed to the process. Certainly at the present time the amount of forest on the high plateau as a whole is relatively small, probably less than 5 per cent of the whole area. It is being gradually still further reduced by fierce fires, mostly in August and September, which sometimes even sweep right across the plateau. Fires started by other than human agency must be very infrequent.

Nevertheless it would appear from McClounie's paper that the general character of the country was much the same fifty years ago as it is now, undulating short grasslands. If not, one would have expected the lower escarpments, closer to the relatively heavily populated lower country, to have suffered more severely than the high plateau; but these escarpments are much more heavily forested than is the plateau.

A further argument against Brass's suggestion is the occurrence in the grasslands of the high plateau of endemic races of francolin and lark (see further below). The grasslands must therefore have been extensive for perhaps millennia rather than centuries to allow for the evolution of these distinct forms.

The influence of man on the Nyika is probably calculable in mere centuries, and may have been responsible for a rapid reduction of the numbers of juniper, which I understand to be particularly vulnerable to fire. The foregoing remarks may raise issues worthy of further investigation, in which the likelihood of more pluvial periods in the past would also have to be considered.

Some space is devoted to the Nyika in Colonel van der Post's recent book, *Venture to the Interior*, and likewise in Arthur Loveridge's *I drank the Zambesi*. The latter is, of course, well known as a naturalist, and publication of the results of his collections, in the *Bulletin of the Museum of Comparative Zoology, Harvard*, is awaited with interest.

I first visited the Nyika in 1937, to make bird collections, and have been there several times since for the same purpose. Recently collections have been made on the Northern Rhodesia side by others, especially E. L. Button. In my "Check List of the Birds of Nyasaland", to be published shortly, it will be noticed that a number of forms are recorded from Nyasaland only from the Nyika, or a very few additional strictly neighbouring localities, as detailed below. These are now considered in relation to territory outside Nyasaland (Tanganyika Territory is abbreviated as T.T.):—

Rufous Sparrow-Hawk (*Accipiter rufiventris*). The race *A. r. rufiventris* has a wide distribution, from South Africa to Kenya Colony. In Nyasaland it is only known from the Vipya Plateau as well as the Nyika. It is also recorded from Kambove, in the Katanga. It is so far unknown, as far as I am aware, from Southern and Northern Rhodesia and T.T.

Red-wing Francolin (*Francolinus levaillantii*). *F. l. crawshayi* may be endemic to the high Nyika grasslands. In southern T.T. *F. l. kikuyuensis* is known from Sao, Iringa district.

Rufous-naped Lark (*Mirafra africana*). *M. a. nyikae* is considered endemic to the high grasslands. The next nearest race is *M. a. nigrescens*, of the Elton Pass, near Mbeya, southern T.T.

Mountain-Babbler (*Malacocincla pyrrhoptera*). *M. p. nyasae* occurs in rain-forest on the eastern escarpment, and otherwise is only known from Nyankhowa and Chimaliro, both less than 10 miles to the eastward. The only other race of this species, *M. p. pyrrhoptera*, is not known any nearer than the eastern Belgian Congo.

Mountain Yellow Flycatcher (*Chloropeta similis*). Found in secondary growth on the edge of rain-forest on the high plateau. Not otherwise known any nearer than Hanang and the Uluguru Mountains, T.T., but it may eventually be found at very high altitudes in southern T.T. No race of this species has been recognized.

Sharpe's Akalat (*Sheppardia sharpei*). *S. s. sharpei* occurs in rain-forest on the eastern escarpment. Elsewhere this race is only known from Nyankhowa and Mzumara in Nyasaland, less than 10 miles to the eastward, and from Mount Rungwe and the Uluguru Mountains, T.T.

Wing-snapping Cisticola (*Cisticola ayresii*). *C. a. ayresii* occurs on the high grasslands. This race is widely distributed, in scattered highland localities. In Northern Rhodesia and Nyasaland the only other known locality is Mwinilunga, in the former territory.

Churring Cisticola (*Cisticola njombe*). This species, whose habitat seems to be the same as that of the mountain yellow flycatcher, is otherwise only known from southern T.T. *C. n. njombe* occurs in the Iringa and Njombe districts, and *C. n. mariae* in the Mbeya and Rungwe districts and on the Nyika.

Scarlet-tufted Malachite Sunbird (*Nectarinia johnstoni*). *N. j. salvadorii* inhabits heath-bushes on the high plateau, and the summit of neighbouring Nyankhowa Mountain. Otherwise only known from the Livingstone Mountains, southern T.T.

Greater Double-collared Sunbird (*Cinnyris afer*). *C. a. whytei* is probably another endemic form, but may just possibly occur at very high altitudes in southern T.T., where the species has not so far been found. It inhabits scattered bushes, and secondary growth on the edge of rain-forest.

Stuhlmann's Weaver (*Othyphantes stuhlmanni*). *O. s. nyikae* is considered endemic, frequenting the edges of the small scattered patches of rain-forest on the high plateau. *O. s. sharpei* occurs in T.T., just north of the Nyasaland boundary.

Marsh Widow-bird (*Coliuspasser psammocromius*). In Nyasaland only known from the Nyika, and otherwise only known from southern T.T., from the Ukinga highlands, Njombe and Dabaga. The breeding season differs from that of other local widow-birds and bishops found at lower levels. The males are in breeding dress from late September until

about February, whereas in all other species the season is from December to May. It would be interesting to ascertain the reason for this difference.

Knowledge of what birds occur on the Nyika is considered to be now virtually complete. I hope that sufficient detail has been given above to suggest the faunistic isolation of the area. It can in this respect be likened to an island remote from other land, one of the last strongholds of species which must formerly have been of more general distribution. It might be suggested that, as there are other high plateaux less than 50 miles away, such as the Vipya (southward), Mafinga, Masuku, and Mukutu ranges (northward and westward), the avifauna of the Nyika is not really so distinctive as is suggested. While the general character of these areas is similar, none of them is nearly so extensive as the Nyika, and none rises appreciably over 7,000 feet. The majority of the Nyika birds do also occur in them. They have been sufficiently carefully investigated to lead me to believe that none of the birds listed above occur there as well, except as specified.

Perusal of Allen's check-list of African mammals, *Bulletin of the Museum of Comparative Zoology, Harvard*, vol. 83, February, 1939, shows eight forms with type-locality Nyika Plateau, and no indication of their occurrence elsewhere (pp. 31, 50, 281, 345, 351, 354, 372, 434). Five of these have since been recorded from either Tanganyika or Northern Rhodesia, or both territories: see Swynnerton and Hayman's check-list of Tanganyika mammals, *Journal of the East Africa Natural History Society*, vol. 20, nos. 6 and 7, 1950, pp. 274-392, and Lancaster's Northern Rhodesia list (Government Printer, Lusaka, 1953). The three recorded in neither of these check-lists are a white-toothed shrew (*Crocidura beirae nyikae*), a bush-rat (*Aethomys nyikae*), and a lesser cane-rat (*Choeromys harrisoni sclateri*). Local knowledge of the mammalian fauna is not, I believe, nearly so advanced as is that of the avifauna, and it may be that these three forms are not endemic to the Nyika. But on the other hand others may still await discovery, and further study may show that, although they have been so assigned, specimens of the five forms subsequently recorded from elsewhere are not identical with those from the Nyika. These are suggestions only. I am not a mammalogist.

There is the further possibility of a race of zebra endemic to the Nyika. I have never seen zebra on the grasslands of any of the neighbouring highlands, and know the Vipya very well. On the Nyika they are still of regular occurrence. R. I. G.

Attwell collected a specimen, which he considered was not identical with specimens from lower country.

Finally, the locality Kaulime, on the north-west side of the plateau, should be briefly mentioned. On some maps it is shown as a small lake. It is in fact no more than a pond, less than an acre or two in extent even at the height of the rains, and considerably less at the end of the dry season. It has been formed by a natural damming up of the North Rukuru River near its source. It is probably of no peculiar faunistic interest, but is important as a watering place for the larger game animals.

PS.—The results of Loveridge's mammal collections have now been published, see *Bulletin of the Museum of Comparative Zoology, Harvard*, Vol. 110, No. 1, June, 1953. *Crocidura beirae nyikae* is recorded (p. 15) from the Musuku, but the other two forms suggested above as endemic to the Nyika remain unaffected.

I have also read B. L. Mitchell's interesting article in *Oryx*, Vol. 2, No. 2, August, 1953. I had not heard before of sable occurring on the high Nyika, nor of cheetah being fairly plentiful.

Denham's Bustard (*Neotis denhami*) should be added to the list of birds. *N. d. jacksoni* occurs very sparingly on the Nyika, and is also found on the Vipya. In Northern Rhodesia it seems to be more widely distributed, on open plains at lower altitudes than in Nyasaland.