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BIRDS FROM THE SAVE RIVER AREA OF MOZAMBIQUEBy ROBERT W. STORER AND WALTER W. DALQUEST¹

IN THE FALL OF 1963, Mr. and Mrs. Jerry Vinson of Wichita Falls, Texas, sponsored an expedition to the Save River area of Mozambique. The purpose of the expedition was to collect and observe birds and mammals in the hitherto rather inaccessible interior region of that country. The resulting collections, deposited in the Midwestern University Collection of Recent Vertebrates, were especially rich in mammals (Dalquest, 1965), but many birds were also taken. In the fall of 1965, Mr. and Mrs. Vinson sponsored a second expedition to the Save River. On this occasion, the aims were to work the area farther inland, to fill certain gaps in the mammal collections, and especially to make a more representative collection of the birds, including the larger forms.

In addition to Mr. and Mrs. Vinson and the junior author, the personnel of the 1963 expedition included Mr. and Mrs. Steve Gose of Wichita Falls, and was staffed by Mozambique Safarilandia, the big-game hunting and outfitting company whose vast concessions include most of the Valley of the Save River in Mozambique. Field work began on September 30 and continued without interruption until October 28. Nearly all the birds were taken near the hunting camp of Zinave on the south bank of the Save River approximately 212 kilometers south-southwest of the city of Beira. A few were taken on October 20 and 21 approximately 15 kilometers south of the mouth of the Save River.

Mr. and Mrs. Vinson and the junior author returned to Zinave on October 5, 1965, and field work continued there and farther inland at

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Panzila hunting camp, approximately 200 kilometers south and 166 kilometers west of Beira, until October 24. Although all members of the party contributed importantly to the success of the expedition, the bulk of the birds were collected by Mr. and Mrs. Vinson and Dalquest and were prepared by Dalquest. Mr. Vinson was especially diligent in seeking out the larger birds, such as hawks and eagles.

Zinave is a permanently maintained camp belonging to Mozambique Safarilandia. It is on the bank of the river, and tall trees and gallery forests, as well as vine-laden riverside thickets occur within a kilometer. Also nearby are many shallow, marshy, vegetation-choked waterholes, where waterbirds abound. Back from the river stretch miles of thornbush scrub, or bushvelt, interspersed with areas of grassland and occasional temporary waterholes. The presence of such varied habitats accounts for the rich avifauna near Zinave.

Panzila camp is also on the bank of the river but is situated farther westward, nearer the Rhodesian frontier, and at a higher elevation. Conditions are essentially like those at Zinave except that there are extensive areas of tall reeds and cane, and numerous deep waterholes with clear, open water at the margins of the sandy channel of the river. Several species of birds were common at Panzila but apparently rare at Zinave.

Although ornithological studies were generally subordinated to those of mammals, the expeditions brought back 284 specimens of birds representing 140 species; an additional 8 species are reported on the basis of sight records. Still, the collection is far from comprehensive. Many kinds of water birds were seen but could not be collected without entering the waterholes, nearly all of which are infested with crocodiles and the blood fluke that causes bilharzia. Several species of raptors seen in flight could not be collected, but the greatest gaps in the collection probably result from the inability of the collectors to distinguish among the various species of small passerine birds of the thickets and forest.

The birds of much of Africa are well known, but this is not true of the Mozambique avifauna. W. H. Peters, C. H. B. Grant, Austin Roberts, and Fernando Frade collected in Mozambique, especially along the coast and in the Zambesi Valley. Rosa Pinto and Lamm (1953-1960) have published an account of the passerine birds of the District of Sul do Save, the portion of Mozambique lying south of the Save River. This account was based on collections in the Museu Dr. Alvaro de Castro in Lourenço Marques. More recently, P. A. Clancey

has collected in Sul do Save and has included material from that district in several of his recent taxonomic studies. Most of the work done in this district appears to have been in the southern part and very little in the valley of the Save. Mackworth-Praed and Grant, in their handbook of South African birds (1962-1963) include the Save Valley in the geographic ranges of numerous species, but in many cases this appears based on interpolation from records for the surrounding regions. This collection thus fills a gap in our knowledge of the birds of southern Mozambique and confirms the existence of many species in an area of presumed occurrence.

Most of the identifications were made by the senior author, who compared many of the specimens with material in the American Museum of Natural History, the U. S. National Museum, and the Field Museum of Natural History. The warblers and flycatchers were identified by Melvin A. Traylor, Jr. For many species, there appears to be considerable difference of opinion as to the number of subspecies to be recognized. Because most of the species in this collection are represented by few specimens and because comparative material from Mozambique is scarce, we have in general adopted the more conservative course of following the "lumpers" rather than the "splitters." This is one reason some of our subspecies determinations differ from those of the list by Rosa Pinto and Lamm. Another is that in a district as large as Sul do Save, which is more than 400 miles long, more than one race of a species might well occur. Much more extensive material than is now available will be needed to work out fully the geographic variation of the birds of this area.

We wish to express here our gratitude to Mr. and Mrs. Vinson for their generosity in making the expeditions possible and for their efforts in accumulating the collections. We are deeply indebted to Baron Werner von Alvensleben, Director of Mozambique Safarilandia, for his labors on behalf of the expedition. His interest in the wildlife of the area, knowledge of the birds and mammals, and of the land and native people, were in great measure responsible for the success of our work. The Governor-General of Mozambique, Senhor M. M. Sarmiento Rodrigues, lent his personal encouragement to our undertaking. Mr. Rui Quadros, a hunter in the employ of Mozambique Safarilandia, collected and prepared some of the birds. Other hunters, including Christian von Alvensleben, Walter Johnson, Sr., Walter Johnson, Jr., Amadeo Peix, and Manuel Posser de Andrede, also contributed specimens and helpful information. We are also grateful to the curators of

The American Museum of Natural History, the U. S. National Museum, and the Field Museum of Natural History, for permission to use the collections under their care, and particularly to Melvin A. Traylor, Jr., for his help with the identifications and for editing the entire annotated list which follows.

ANNOTATED LIST

Struthio camelus Linnaeus. Ostrich.

No specimens taken. Ostriches were not common in the Save River concessions. Single birds, pairs, and groups of three or four were seen near Zinave; larger numbers were said to live some ten miles to the north. Near Zinave an ostrich lived with a herd of sable antelope and apparently served as their "lookout" when the antelope were feeding. Ostriches are strictly protected in Mozambique.

Tachybaptus ruficollis capensis (Salvadori). Dabchick.

Zinave: 1 ♀? The only grebe seen had just completed the molt of the primaries on October 6. For the use of *Tachybaptus* instead of *Podiceps* for the dabchicks, see Storer, 1963.

Phalacrocorax africanus (Gmelin). Long-tailed Cormorant.

These small cormorants were common at Panzila. They seemed much more skillful and agile fliers than any American cormorant and were shy and difficult to approach.

Ardea goliath Cretzschmar. Goliath Heron.

Several lived near the shallow, weed-choked waterholes inland from the river near Zinave. They were tolerant of smaller herons, Egyptian Geese, and Spur-winged Geese; they showed no fear of large crocodiles or hippos.

Ardea purpurea purpurea Linnaeus. Purple Heron.

Panzila: 1 ♀. The species was not uncommon at the deep waterholes in the reedbeds at the edge of the river channel at Panzila.

Ardeola ralloides (Scopoli). Squacco Heron.

Zinave: 1 ♂, 1 ♀. Squacco Herons were common in the shallow, weed-grown waterholes near Zinave and were sometimes seen in grassy areas along the Save River.

Egretta garzetta garzetta (Linnaeus). Little Egret.

Zinave: 1 ♀. The Little Egret is probably the most common, and certainly the most conspicuous, heron in the Save River area. At Panzila, a favored roost was in low trees and reeds overhanging and close to a deep waterhole near the river. As each flight of birds arrived, there was a noisy quarreling and reshuffling of positions. Newcomers apparently forced established birds from favored sites, and displaced egrets circled and disturbed still others. Birds continued to arrive at the roost until dark.

Nycticorax nycticorax nycticorax (Linnaeus). Black-crowned Night Heron.

Panzila: 2 ♂ ♂. Night Herons appeared quite common; their call could be heard almost any hour of the night from our camp.

Scopus umbretta bannermani Grant. Hammerkop.

Zinave: 1 ♂? Several of the enormous nests of Hammerkops were seen ten to twenty feet from the ground in thorny trees.

Ephippiorhynchus senegalensis (Shaw). Saddle-bill.

A few Saddle-bills were seen along the Save River.

Dissoura episcopus microscelis (G. R. Gray) Woolly-necked Stork.

Panzila: 2 ♀ ♀.

Leptoptilos crumeniferus (Lesson). Marabou.

Panzila: 1 ♀. Less than a half-dozen Marabous were seen on the Save River.

Hagedashia hagedash hagedash (Latham). Hadada.

Zinave: 1 ♂?

Alopochen aegyptiaca (Linnaeus). Egyptian Goose.

Zinave: 1 ♂. This is the commonest goose in the Save River area.

Plectropterus gambensis (Linnaeus). Spur-winged Goose.

These large, black geese are common in the Save River area.

Elanus caeruleus caeruleus (Desfontaines). Black-shouldered Kite.

Zinave: 1 ♀. In 1963 they were not uncommon about grass fires set by the natives. None was recorded in 1965.

Milvus migrans parasitus (Daudin). Black Kite.

Zinave: 1 ♂, 2 sex? This kite is a common and conspicuous scavenger. The three specimens vary considerably in depth of coloration.

Melierax metabates mehowi Cabanis. Dark Chanting-goshawk.

Panzila: 3 adult sex?, 1 immature ♀. A common and conspicuous hawk of the bushveld. The adults have more white on the rump than most examples from Angola in the Field Museum but are matched by some.

Micronisus gabar gabar (Daudin). Gabar Goshawk.

Zinave: 1 ♀? The only example recorded.

Aquila wahlbergi Sundevall. Wahlberg's Eagle.

Panzila: 2 ♂ ♂. This small eagle is moderately common in the bushveld.

Haliaeetus vocifer, (Daudin). Fish Eagle.

Panzila: 1 ♂. Fish Eagles were common along the Save River and the larger waterholes nearby. One- or two-pound catfish were their favorite prey at the waterholes, and the ground beneath the trees in which these birds ate their catches was littered with the armored skulls of these fish.

Pseudogyps africanus (Salvadori). White-backed Vulture.

Panzila: 1 ♂. Vultures and mammalian scavengers such as hyaenas and jackals were unaccountably scarce in view of the abundance of large game (Dalquest, 1965). Although twelve vultures and one marabou were noted at one lion kill, two or three vultures were usually all that were seen at a kill. Most of the vultures seen well enough for identification were of this species. Two examples of an unidentified smaller form were seen. A nest of White-backed Vultures in a tall baobab tree contained a nearly grown young on October 13, 1965.

Polyboroides typus typus A. Smith. Harrier Hawk.

Panzila: 1 adult ♂; Zinave: 1 immature ♂? Both specimens were shot in flight in bushveld. The young bird is in very worn plumage.

Terathopius ecaudatus (Daudin). Bateleur.

Zinave: 1 ♂. These eagles were seen frequently almost throughout the Save River area.

Francolinus sephaena sephaena (A. Smith). Bush Partridge.

Zinave: 2 ♂ ♂. These francolins were common in the bushveld and open woodland. *Pternistis afer swynnertoni* (W. Sclater). Spurfowl.

Zinave: 1 ♂, 1 ♀, 1 sex? Spurfowl inhabited the same general areas as the Bush Partridges but did not associate with them.

Numida meleagris mitrata Pallas. Helmeted Guinea-fowl.

Zinave: 1 ♂, 1 ♀. Flocks of six to fifteen were commonly seen in open bushveld. In the late afternoon when they move to the river or to waterholes to drink, hundreds may be seen in a short distance.

Guttera edouardi edouardi (Hartlaub). Crested Guinea-fowl.

Panzila: 4 sex? Save River, 15 km from mouth: 1 ♂. Although probably not uncommon, Crested Guinea-fowl were shy and rarely seen.

Limnocorax flavirostra (Swainson). Black Crake.

Zinave: 1 ♂.

Gallinula chloropus meridionalis (Brehm). Moorhen.

Zinave: 1 ♂. Only one was seen.

Balearica regulorum (Bennett). South African Crowned Crane.

A pair of cranes visited the large, shallow waterhole near Zinave on several occasions in October, 1965. They are rare but familiar visitors in the Save River area and are protected by the staff of Mozambique Safarilandia.

Lissotis melanogaster notophila Oberholser. Black-bellied Bustard.

Zinave: 1 ♂, 1 ♂? This was the only species of bustard seen in the Save River area and was not common. Baron von Alvensleben told Dalquest that bustards are much less common than in past years.

Actophilornis africana (Gmelin). African Jacana.

Zinave: 2 ♀ ♀. The larger jacana was abundant and conspicuous in the shallow, weedy waterholes near Zinave.

Microparra capensis (A. Smith). Smaller Jacana.

Although the white hunters said this species was common on the floating vegetation of the shallow waterholes near Zinave, Dalquest saw but two.

Xiphidiopterus albiceps (Gould). White-headed Plover.

Zinave: 1 ♀. These plovers were seen occasionally in the shallow sandy riffles of the river and on open, grassy plains. Some observations assigned to this species may have applied to the Wattled Plover, *Afribyx senegalensis*.

Stephanibyx lugubris (Lesson). Senegal Plover.

Zinave: 2 ♀ ♀. Downy young of the Senegal Plover were noted in mid-October, 1963.

Hoplopterus armatus (Burchell). Blacksmith Plover.

Zinave: 1 ♂. Blacksmith Plovers were occasionally noted at waterholes but more often were seen foraging singly or in pairs along the sandy shallows of the river.

Tringa hypoleucos (Linnaeus). Common Sandpiper.

Zinave: 1 ♀. The small sandpipers seen along the sandy shallows of the Save River may have included several species, but the only specimen taken was of this Eurasian species.

Himantopus himantopus himantopus (Linnaeus). Black-winged Stilt.

Zinave: 1 ♂. Stilts were fairly common in the sandy and muddy shallows of the Save River.

Glareola pratincola fuelleborni Neumann. Pratincole.

Zinave: 1 ♂. These gregarious birds were common on open and bare areas on the grasslands. In October, 1963, they were found in numbers with their downy young on areas of dried mud along the margins of waterholes.

Rynchops flavirostris Vieillot. Skimmer.

Zinave: 1 ♀. The only Skimmer seen was shot as it flew over the river.

Pterocles bicinctus usheri Benson. Double-banded Sandgrouse.

Zinave: 1 ♂, 2 ♀. Sandgrouse were only moderately common near Zinave, but upstream from Zinave, especially near Panzila, they were common to abundant.

Treron delalandii (Bonaparte). Delalande's Green Pigeon.

Save River, 15 km from its mouth: 1 ♂; Zinave: 1 ♀. This fruit pigeon is rare near Zinave, but near Panzila the species is common.

Streptopelia semitorquata (Rüppell). Red-eyed Dove.

Zinave: 1 ♂. Red-eyed Doves were not common.

Streptopelia capicola tropica (Reichenow). Ring-necked Dove.

Zinave: 1 ♀. The Ring-necked Dove was the commonest large dove in the Save River area.

Oena capensis capensis (Linnaeus). Namaqua Dove.

Zinave: 1 ♂. The only one seen was shot on the short grass of the camp airstrip at Zinave. The white hunters at the camp said that the species is sometimes common at Zinave.

Turtur chalcospilos (Wagler). Emerald-spotted Wood-dove.

Zinave: 2 ♂ ♂, 1 ♀. This dove is abundant and widespread through the bushveld.

Poicephalus cryptoxanthus cryptoxanthus (Peters). Brown-headed Parrot.

Zinave: 1 ♂, 3 ♀ ♀. Small flocks of 6 to perhaps 15 Brown-headed Parrots were commonly seen in the taller trees of the bushveld, and especially in the woodlands along the river.

Gallirex porphyreolophus porphyreolophus (Vigors). Violet-crested Turaco.

Zinave: 2 ♂ ♂, 1 ♀. The loud calls of these turacos are characteristic sounds of the denser woodland in the bushveld and the tall trees and thickets along the Save River.

Corythaixoides concolor concolor (A. Smith). Go-away Bird.

Zinave: 1 ♂, 1 ♀, sex?; Go-away Birds are common, tame, and conspicuous in the bushveld.

Chrysococcyx klaas klaas (Stephens). Klaas' Cuckoo.

Zinave: 1 ♂. A few groups of four to six of these small, green cuckoos were seen.

Centropus superciliosus burchellii Swainson. White-browed Coucal.

Zinave: 2 ♂ ♂.

Bubo africanus africanus (Temminck). Spotted Eagle-owl.

Panzila: 1 ♂. The bird collected was on the ground, on or near the ruts of a jeep road, and flew to the limb of a tree when it was approached. It was late evening, and the bird's stomach was empty.

Glaucidium capense capense (A. Smith). Barred Owllet.

Panzila: 1 ♀. The specimen was captured just before dark; its stomach contained only the remains of insects.

Ciccaba woodfordii woodfordii (A. Smith). African Wood-owl.

Panzila: 1 ♂. The Wood-owl was captured very shortly after dark in a bat net set under tall trees by the river.

Caprimulgus fossii Hartlaub. Gabon Nightjar.

Zinave: 1 ♀. Nightjars were abundant in the Save River area, and all seen were thought to be this small species. Females were incubating in October.

Chaetura boehmi Schalow. Boehm's Spinetail.

Zinave: 1 ♂, 1 ♀. These odd little swifts were common about the large baobab trees on the bushveld and were seen to enter small holes in the trunks. A single

pair was usually seen near a tree. On still afternoons, they hunted in pairs 20 to 50 feet from the ground. They were often seen with Mosque Swallows.

Colius striatus minor Cabanis. Speckled Mousebird.

Zinave: 1 ♂. The only example seen was taken from a low, vine-grown bush at the edge of an extensive grassland.

Colius indicus pallidus Reichenow. Red-faced Mousebird.

Zinave: 2 ♂ ♂, 1 ♀. In contrast to the previous form, this mousebird was common. Flocks of 10 to 20 were often seen sweeping over the bushveld in much the manner of American parakeets, which they closely resemble in flight.

Ceryle maxima maxima (Pallas). Giant Kingfisher.

Zinave: 1 ♀? The only Giant Kingfisher seen. Its throat and stomach were filled with small fishes.

Ceryle rudis rudis (Linnaeus). Pied Kingfisher.

Zinave: 1 ♂. The Pied Kingfisher is the most common water kingfisher in the Save River area.

Ispidina picta natalensis (A. Smith). Pigmy Kingfisher.

Panzila: 1 ♂; Zinave: 1 ♂. The Pigmy Kingfisher is probably common. Two were taken in nets set for bats, between trees in the bushveld. A few were seen flying, always in open, wooded areas.

Halcyon albiventris orientalis Peters. Brown-hooded Kingfisher.

Zinave: 1 ♂. This is the most common land kingfisher in the area.

Halcyon chelicuti chelicuti (Stanley). Striped Kingfisher.

Panzila: 1 ♂; Zinave: 1 ♂.

Dicrocercus hirundineus hirundineus (A. A. H. Lichtenstein). Swallow-tailed Bee-eater.

Zinave: 1 ♂, 1 ♀. In October, 1963, these bee-eaters were still breeding, and pairs were noted in open woodland. In October, 1965, flocks of these birds, sometimes numbering 50 or more, were seen flying over the gallery forest along the river or perched in the tops of the taller trees.

Melittophagus pusillus meridionalis Sharpe. Little Bee-eater.

Zinave: 3 ♂ ♂, 2 ♀ ♀. Little Bee-eaters were common throughout the Save River area.

Merops apiaster Linnaeus. Bee-eater.

Zinave: 1 ♂, 1 ♀. Flocks, probably of migrant birds, were not uncommon in the gallery forest back from the river at Zinave.

Merops nubicoides Des Murs and Pucheran. Southern Carmine Bee-eater.

This species appears to be rare. In 1963 Dalquest saw three, either flying high over grass fires or perched in the tops of tall baobab trees.

Coracias caudata caudata Linnaeus. Lilac-breasted Roller.

Zinave: 3 ♂ ♂, 1 ♀. Lilac-breasted Rollers are fairly common and conspicuous throughout the Save River area.

Coracias spatulata Trimen. Racquet-tailed Roller.

Zinave: 2 ♂ ♂, 1 ♀. These rollers were uncommon.

Eurystomus glaucurus pulcherrimus Neumann. Broad-billed Roller.

Zinave: 4 ♂ ♂. This is the commonest roller in the Save River area.

Upupa epops africana Bechstein. African Hoopoe.

Zinave: 2 imm. ♂ ♂; without locality: 1 ♂. Hoopoes are fairly common in the bushveld and are usually seen in pairs and small (? family) groups.

Phoeniculus purpureus marwizi (Reichenow). Green Wood-hoopoe.

Zinave: 2 ♂♂, 1 ♀. These noisy birds are common throughout the bushveld.

Rhinopomastus cyanomelas schalowi Neumann. Scimitar-bill.

Zinave: 1 ♀. The specimen was collected in a thicket by the river.

Tockus alboterminatus australis Roberts. Crowned Hornbill.

Zinave: 2 ♂♂, 1 ♀.

Tockus flavirostris leucomelas Lichtenstein. Yellow-billed Hornbill.

Zinave: 2 ♂♂, 1 ♀. The Crowned and Yellow-billed hornbills are the commonest hornbills in the Save River area.

Tockus nasutus epirhinus (Sundevall). Gray Hornbill.

Zinave: 1 ♂. This species is evidently rare in the area. Dalquest saw none, and our only specimen was collected by Mr. Vinson.

Bycanistes bucinator (Temminck). Trumpeter Hornbill.

Zinave: 1 ♂. This uncommon hornbill was most often seen in the gallery forest along the Save River, but it was more numerous farther inland, as at Panzila.

Bucorvus leadbeateri (Vigors). Ground Hornbill.

Zinave: 2 heads. Ground Hornbills were seen, always in pairs, in clearings in the bushveld. In 1963, one was kept in a cage in camp. It remained silent in a shaded corner day after day. It gulped down the bodies of birds and small mammals prepared as specimens, sometimes eating a pound of meat at a time. A tame bird kept in camp in 1965 had the run of the area. It was curious and affectionate and would approach one to have its head rubbed. It was adroit at digging out the large millipeds and orthopterans from their holes in the ground, crunching them in its enormous bill. It was seen to capture and swallow small lizards. It would eat the bodies of freshly skinned mice, but not if they had dried out appreciably. It would seize the body in its bill, toss it into the air with a twisting motion, catch it head downward, and gulp it down with jerking motions of the bill. At night, it perched on the roof of one of the huts.

Lybius torquatus zombae (Shelley). Black-collared Barbet.

Zinave: 2 ♂♂. These barbets were uncommon.

Trachyphonus vaillantii Ranzani. Levillant's Barbet.

Zinave: 1 ♀. The only example seen was in a low tree in extensive bushveld and permitted close approach. It was in heavy molt.

Indicator minor minor Stephens. Lesser Honey-guide.

Zinave: 1 ♀. This appears to be a rare bird in the Save River area. Mr. Quadros pointed out to Dalquest the only one taken.

Campethera cailliautii fuelleborni (Neumann). Little Spotted Woodpecker.

Zinave: 1 ♂. The only example seen was collected in open woodland. *C. c. quadrosi*, described on the basis of a single specimen from Funhalouro, Sul do Save, is said to differ from *fuelleborni* principally in the orange or vermilion, rather than scarlet, nape (Rosa Pinto, 1959: 21). The specimen from Zinave is even more scarlet on the nape than a specimen of the nominate race from Kenya. This suggests that *quadrosi* may be based on an aberrant individual or has a very small range.

Dendropicos fuscescens hartlaubii Malherbe. Cardinal Woodpecker.

Zinave: 1 ♂, 2 ♀♀. This was the commonest woodpecker in the Save River area. In general, woodpeckers were scarce.

Thripas namaquus namaquus (A. A. H. Lichtenstein). Bearded Woodpecker.

Zinave: 1 ♀? A few large woodpeckers, probably all this species, were found in the woodland and gallery forest along the river.

Eremopteryx leucotis smithi (Bonaparte). Chestnut-backed Sparrow-lark.

Panzila: 3 ♂♂, 2 ♀♀. Flocks of 20 to 50 birds were seen on short-grass plains. The specimens were taken October 16 and 19, at which time they were in worn plumage and in the early stages of the annual molt. One male, farther along in the molt than the others, appears closer to the race *madaraszii* (Reichenow) than to *smithi*. Rosa Pinto and Lamm (1953:76) report only *smithi* from Sul do Save.

Mirafra rufocinnamomea fischeri (Reichenow). Flappet-lark.

Zinave: 1 ♂. These larks were not common and were restricted to plains and grassy flats. The specimen agrees well with examples of *fischeri*; examples of *pintoii* were not available for comparison.

Hirundo smithii smithii Leach. Wire-tailed Swallow.

Zinave: 2 ♂♂. Wire-tailed Swallows were common, especially near habitations. They commonly nested in the overhanging eaves of huts, next to the sticks that support the thatch.

Cecropis abyssinica unitatis (W. Sclater and Mackworth-Præd). Striped Swallow.

Panzila: 1 ♂; Zinave: 1 ♂. The Striped Swallow was not common; it was most often seen near human habitations.

Cecropis senegalensis monteiri (Hartlaub). Mosque Swallow.

Panzila: 1 ♂; Zinave: 3 ♂♂. This was the most common and conspicuous swallow of the Save River area. One pair could be seen near almost every large baobab tree, and others lived near human habitations. They nested in holes high in trees.

Pycnonotus barbatus layardi Gurney. Black-capped Bulbul.

Zinave: 3 ♂♂, 2 ♀♀. This was one of the commonest and most conspicuous small birds in the Save River area.

Pycnonotus importunus hypoxanthus (Sharpe). Sombre Greenbul.

Zinave: 4 ♂♂, 4 ♀♀. This bulbul was common in thickets by waterholes and the riverbank.

Chlorocichla flaviventris occidentalis Sharpe. Yellow-bellied Greenbul.

Panzila: 1 ♂. Noted only in dense thickets at the base of the steep banks of the river valley at Panzila.

Phyllastrephus terrestris intermedius Gunning and Roberts. Bristle-necked Brownbul.

Zinave: 1 ♀. This species was a shy, uncommon resident of the denser thickets along the river bank.

Dicrurus adsimilis fugax Peters. Fork-tailed Drongo.

Panzila: 1 ♂; Zinave: 1 ♂. Drongos were commonly seen, singly or in pairs, in the bushveld.

Oriolus larvatus tibicen Lawson. Black-headed Oriole.

Zinave: 1 ♂. Orioles were uncommon in the taller trees of woodland and gallery forest along the Save River.

Corvus albus. P. L. S. Müller. Pied Crow.

Zinave: 1 ♂. The Pied Crow was common. It is a noisy bird with typical crow habits.

Parus niger niger Vieillot. Southern Black Tit.

Zinave: 1 ♀, 1 ♀?

Muscicapa caeruleascens impavida Clancey. Ashy Flycatcher.

Zinave: 1 ♂. According to Traylor, this bird is large and pale and answers the description of *impavida*.

Bradornis pallidus divisus Lawson. Pale Flycatcher.

Zinave: 1 ♀. On the basis of its small size and pale coloration, Traylor refers this specimen to *divisus*. We have not seen other material of this race.

Melaenornis pammelaina pammelaina (Stanley). South African Black Flycatcher.

Zinave: 2 ♂ ♂. These black flycatchers were fairly common in open woodland.

Batis soror Reichenow. Mozambique Batis.

Zinave: 2 ♂ ♂, 1 ♀. This small flycatcher was fairly common in brushy areas and low trees.

Terpsiphone viridis plumbeiceps Reichenow. Gray-headed Paradise Flycatcher.

Panzila: 1 ♂; Zinave: 3 ♂ ♂. Uncommon.

Turdoides jardineii natalensis Roberts. Arrow-marked Babbler.

Zinave: 1 ♂, 1 ♀. Pairs and small groups were occasionally seen.

Apalis flavida neglecta (Alexander). Yellow-chested Apalis.

Zinave: 1 ♀.

Sybiella rufescens pallida (Alexander). Long-billed Crombec.

Zinave: 1 ♂.

Eremomela scotops chlorochlamys Clancey. Green-cap Eremomela.

Zinave: 1 ♂. This specimen answers the description of the race *chlorochlamys* (Clancey, 1965). We have not seen comparative material.

Camaroptera brachyura bororensis Gunning and Roberts. Green-backed Camaroptera.

Zinave: 1 ♂.

Cisticola chiniana subsp? Rattling Cisticola.

Zinave: 1 ♀. This specimen is in too poor condition for racial determination.

Prinia subflava affinis (A. Smith). Tawny-flanked Prinia.

Zinave: 2 ♀ ♀.

Erythropygia leucophrys pectoralis A. Smith. White-browed Scrub-robin.

Zinave: 3 ♂ ♂. This was a common, widespread species.

Erythropygia quadrivirgata quadrivirgata (Reichenow). Eastern Bearded Scrub-robin.

Zinave: 2 ♂ ♂, 2 ♀ ♀. This scrub-robin was widespread and common.

Cossypha natalensis intensa Mearns. Red-capped Robin-chat.

Zinave: 1 ♂.

Cossypha humeralis (A. Smith). White-throated Robin-chat.

Panzila: 1 ♀.

Myrmecocichla arnotti arnotti (Tristram). White-headed Black Chat.

Zinave: 1 ♂, 1 ♀. White-headed Black Chats were fairly common in open bushveld. This species was not recorded in Sul do Save by Rosa Pinto and Lamm (1953-1960).

Motacilla aguimp vidua Sundevall. African Pied Wagtail.

Zinave: 1 ♂, 2 ♀ ♀. This was a common species along the sandy beaches of the river and less common along the margins of waterholes in the bushveld.

Macronyx croceus (Vieillot). Yellow-throated Long-claw.

Zinave: 1 ♂, 1 ♀. This long-claw was common, singly or in pairs, along the margins of grasslands.

Nilais afer solivagus Clancey. Brubru.

Zinave: 1 ♀.

Dryoscopus cubla chapini Clancey. Black-backed Puff-back.

Panzila: 1 ♂; Zinave: 1 ♂, 1 ♀. This small bird was abundant in woodland,

Tchagra senegala senegala (Linnaeus). Black-headed Bush-shrike.

Zinave: 1 ♂, 1 ♀. This was a fairly common and distinctive bird in woodland.

Laniarius ferrugineus tongensis Roberts. Southern Boubou.

Zinave: 1 ♀. This shrike was uncommon in riverside thickets.

Telophorus sulfureopectus similis (A. Smith). Sulphur-breasted Bush-shrike.

Zinave: 3 ♂ ♂, 1 ♀. The Sulphur-breasted Bush-shrike was fairly common locally.

Telophorus quadricolor quadricolor (Cassin). Four-colored Bush-shrike.

Zinave: 1 ♂. The specimen was the only one seen.

Malaconotus blanchoti hypopyrrhus Hartlaub. Gray-headed Bush-shrike.

Panzila: 2 ♂ ♂. This large shrike was found in the bushveld where the thorn scrub was especially thick.

Prionops plumata poliocephala (Stanley). Straight-crested Helmet-shrike.

Zinave: 1 ♂, 2 ♀ ♀.

Anthreptes collaris zuluensis (Roberts). Collared Sunbird.

Zinave: 2 ♂ ♂, 1 ♀. This little sunbird was fairly common almost everywhere in the bushveld or woodland.

Nectarinia senegalensis gutturalis (Linnaeus). Scarlet-chested Sunbird.

Zinave: 2 ♂ ♂. This sunbird was uncommon in trees along the river and in the woodland back from it.

Nectarinia talatala (A. Smith). White-bellied Sunbird.

Zinave: 1 ♂, 1 ♀.

Nectarinia bifasciata microrhyncha (Shelley). Little Purple-banded Sunbird.

Zinave: 2 ♂ ♂. Several groups were seen in rather tall trees in gallery forest.

Lamprotornis corruscus corruscus Nordmann. Black-breasted Glossy Starling.

Zinave: 1 ♀. This starling was uncommon.

Lamprotornis chalybaeus nordmanni (Hartert & Neumann). Blue-eared Glossy Starling.

Panzila: 1 ♂; Zinave: 2 ♂ ♂, 1 ♀. This was the commonest starling in the Save River area.

Cinnyricinclus leucogaster verreauxi (Bocage). Violet-backed Starling.

Zinave: 1 ♂. Flocks of these starlings were seen on a few occasions in the taller, denser trees near the river.

Petronia superciliaris (Blyth). Yellow-throated Sparrow.

Zinave: 1 ♂.

Ploceus xanthopterus xanthopterus (Finsch and Hartlaub). Southern Brown-throated Weaver.

Panzila: 1 ♂, 1 ♀; Zinave: 2 ♂ ♂, 1 ♀. This appeared to be the most common weaver in the area. Nesting colonies were seen in October, 1963.

The specimens are referred to the nominate race but are near the upper extreme of size for it (wing: adult ♂ ♂, 76, 76; immature ♂, 73; ♀ ♀, 67, 68) and thus approach the race *marleyi*.

Ploceus intermedius cabanisii (Peters). Lesser Masked Weaver.

Zinave: 1 ♀. The single specimen was taken in low bushes near a waterhole.

Ploceus cucullatus spilonotus Vigors. Spotted-backed Weaver.

Panzila: 1 ♂; Zinave: 2 ♂ ♂, 3 ♀ ♀. This weaver was widespread but less common than *P. xanthopterus*. Several large nesting colonies were found in October, at which time some young birds were almost ready to leave the nest.

Our birds approach the more northern race, *nigriceps*, but are nearest to *spilono-*

tus. The males answer the description of Clancey's race *dilutescens*, but we have not seen sufficient material to test the validity of that form.

Malimbus rubriceps rubriceps (Sundevall). Red-headed Weaver.

Zinave: 1 ♀.

Quelea quelea lathami (A. Smith). Red-billed Quelea.

Save River 15 km from mouth: 1 ♂; Zinave: 2 ♀ ♀? This and the following species were commonly found in flocks in the Save River area.

Euplectes orix nigrifrons (Böhm). Red Bishop.

Panzila: 2 ♀ ♀; Zinave: 3 ♂ ♂, 3 ♀ ♀. The males are all in non-breeding dress.

Vidua macroura (Pallas). Pin-tailed Whydah.

Zinave: 1 ♂, 1 ♀. This appears to be a rare form; it was seen only occasionally in open woodland at Zinave.

Estrilda senegala rendalli Hartert. Red-billed Fire-finch.

Panzila: 4 ♂ ♂, 1 ♀; Zinave: 1 ♂, 1 ♀. This finch was abundant in grasslands and clearings.

Estrilda rhodopareia jamesoni (Shelley). Jameson's Fire-finch.

Zinave: 1 ♂. The only specimen was taken in a thicket at the edge of camp.

Estrilda astrild cavendishi Sharpe. Waxbill.

Panzila: 2 ♂ ♂? Small flocks of waxbills were seen in palms and bushes at the edges of the sandy flats along the river.

Estrilda angolensis niassensis (Reichenow). Cordon Bleu.

Zinave: 1 ♂, 1 ♂? Cordon Bleus were found in small clearings in the grassland and bushes in the bushveld.

Pytilia melba belli Grant. Green-winged Pytilia.

Zinave: 1 ♂. The one specimen was collected in a dense thicket.

Ortygospiza atricollis muelleri Zedlitz. Quail-finch.

Zinave: 1 ♀.

Serinus citrinipectus Clancey and Lawson. Lemon-breasted Seed-eater.

Zinave: 1 ♂? The only specimen was shot from a flock of small birds passing over the bushveld. This record extends the known range of this newly described species northward.

Emberiza flaviventris subsp? Golden-breasted Bunting.

Zinave: 1 ♀.

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