

NOTES ON THE SEA-BIRDS OF BRAVA.

BY M. E. W. NORTH, M.B.O.U

I.—INTRODUCTION.

The town of Brava is on the south-east coast of ex-Italian Somaliland, mid-way between Mogadishu and Kismayu. The coast off Brava is by no means rich in islands suitable for sea-birds, but four are utilized. A description of these islands, working south-west, follows:—

- (1) *Chilani*.—This adjoins the coast, from which it can be reached on foot at low tide, by means of a reef. It is a conical, grass-covered islet, perhaps sixty yards in diameter, crowned by a beacon, with small cliffs on three sides. Roseate Terns (*S. dougallii*) nest here.
- (2) *Maginnis*.—A mile south-west of Brava, the beach curves out to a low spit, where a mosque is situated. This is Mosque Point, a favourite resting-place for terns. A couple of hundred yards from the point, there is a string of coral boulders on a base that dries out at low tide, called Maginnis. Sooty Gulls (*L. hemprichii*) and Roseate Terns nest on the tops of these boulders.
- (3) *Mnara*.—An islet three miles south-west from Brava, similar in size and shape to Chilani, accessible at low tide. An ancient watch-tower is built on the summit. Sooty Gulls nest on outlying boulders.
- (4) *El Bakr*.—An islet ten miles south-west of Brava, covered with rough undergrowth and grass. It adjoins a sandy point, from which it can be reached at low tide. A special visit was made to this island on August 10, which proved disappointing, since there were no resident sea-birds. A few terns' egg-shells were, however, found in the undergrowth. They measure 47×28 , 47×29 , 38×28 and $40 \times ?$ mm. (the latter fragmentary). I do not see much point in guessing at their identity, beyond saying that they may belong to the White-cheeked Tern (*S. repressa*), or to the Roseate, or possibly to the Bridled (*S. anaethetus*), a species not seen by me at Brava, but which breeds on the Kiunga islands.

A list of species follows, arranged according to status:—

A.—Resident and breeding.

Larus hemprichii Sooty Gull. A few breed on Maginnis and Mnara.

Sterna dougallii Roseate Tern. A few breed on Chilani and Maginnis, but most birds are passage migrants.

Sterna albifrons saundersi. Indian Little Tern. A small colony was found nesting on the sandhills of the mainland, three miles south-west of Brava. This is the first breeding record for the whole east coast of Africa.

B.—Passage migrants in breeding plumage.

Sterna repressa White-cheeked Tern.

Sterna bengalensis Lesser Crested Tern.

Sterna bergii Swift Tern.

C.—Visitors in non-breeding, immature plumage.

Sterna hirundo Common Tern.

As regards the period of observation, I was at Brava from 25/3/41 till 21/6/41, while in charge of the district; then I was transferred. However, thanks to Brigadier D. H. Wickham, I was able to return here for six days' local leave from 8/8/41 to 13/8/41, thereby obtaining much additional information.

With reference to the resident species, a few pairs of Sooty Gulls and Roseate Terns try to nest on the islands, but rarely succeed, as these are easily accessible and close to the town, and the eggs are collected as soon as laid. The Little Terns stand a much better chance by breeding inland. The Brava people call the Sooty Gull "Mikodo," and the terns, "Sahali."

The geographical position of Brava will, I think, explain the number and diversity of its passage migrants. Along the whole thousand-mile stretch of coast between Cape Gardafui and Kismayu, there is hardly a single sea-bird island, except for a number of insignificant off-shore rocks and islets, such as at Brava. Between Kismayu and Lamu, however, there is the Kiunga Archipelago, a chain of islands which provides easily the greatest breeding haunt for sea-birds in East Africa. I am positive that the numerous migrants seen in breeding plumage at Brava in June, were on their way to the Kiungas. The trend of the Somali coast is south-westerly, rather than southerly; hence, many of the passage migrants returning from their winter quarters in the northern part of the Indian Ocean, can be expected to strike the shore well to the north of Brava, subsequently "coasting" south-west to their breeding haunts. The position of Brava can, therefore, be described as a Kiunga outpost, passed by many birds, colonized by few.

The Kiunga Islands are very little known. The only ornithologist to have explored them seems to be Jackson, in 1906, and even he did not go in person, but sent his collector, Baraka. A full account of Baraka's discoveries, and of the islands themselves, is given in Jackson's book. Sooty Gull, Roseate Tern, White-cheeked Tern, Bridled Tern (*S. anaethetus*) and Noddy Tern (*Anous stolidus*) were all found breeding, also Sooty Tern (*S. fuscata*), according to an incidental reference on page 427. Swift and Lesser Crested Terns are thought likely, but not yet proved, to breed on some of the outer islands. These are difficult of access, not merely owing to their steep, coral sides, but because the breeding season is from July onwards, when the south-west monsoon is blowing hard, and the sea is at its roughest. Baraka's exploration of the Kiungas took place nearly forty years ago, so it is about time the place was re-visited.

The presence of non-breeding Common Terns at Brava, is of interest for two reasons—first, since it confirms Jackson's Kenya records, which seem to have been regarded as a little doubtful, and secondly, because one would not have expected to see this species in *June*, it being usually regarded as a winter visitor.

On 27/10/41, I was able to visit the mouth of the river Juba, where I saw two interesting species, details of which are incorporated in this paper. They were—

Larus fuscus Lesser Black-backed Gull. Not recorded from the coast of Kenya.

Hydroprogne caspia Caspian Tern. A rare visitor.

The following abbreviations are used in references to literature:—

"Jackson" for Jackson and Sclater, "Birds of Kenya and Uganda," 1938.

"Archer" for Archer and Godman, "Birds of British Somaliland," 1937.

"Sclater" for Sclater, "Systema Avium Aethiopicarum," 1924.

"Witherby" for Witherby, "Handbook of British Birds," 1938-41.

Alexander's "Birds of the Ocean" was unfortunately not available

In addition to Jackson's observations for Kenya, and Archer's for the Gulf of Aden, the following papers on sea-birds are important:—

"Ornithology of the East African Islands" by R. E. Moreau, *Ibis*, January, 1940. Deals with the nesting colonies of Kenya, Tanganyika and Zanzibar.

"Ornithology of the Seychelles Islands" by D. Vesey-Fitzgerald, *Ibis*, October, 1941. Covers not only the Seychelles proper, but also the related island-groups lying south-westwards (Adalbra, Providence, etc.).

I was able to collect only a limited number of eggs and specimens, nearly all of which are at the Coryndon Museum.

II.—DETAILED NOTES.

Larus fuscus Linn. Lesser Black-backed Gull.

Not seen at Brava, but on 27/10/41, I saw a single specimen at the mouth of the river Juba, resting on a sandbank with a mixed flock of terns. Back and upper-wings dark; rest of body white. Judging by Sclater, the bird may have belonged to the eastern race—*taiemyrensis*—which winters on the coast of Somaliland. Apparently there is no *coastal* record for Kenya, though the form *fuscus* is common on the inland lakes (Jackson).

Larus hemprichii (Bruch). Sooty Gull.

A resident and breeding species, called "Mikodo." In April, a few adults and immatures could usually be seen resting on the shore at Mosque Point, in company with terns (Swift and Lesser Crested). When a Swift Tern came sailing in, gorged with fish, two or three gulls rose and gave chase to it. The tern dashed away out to sea, twisting, turning and screaming, with the gulls in hot pursuit, showing themselves every whit as fast as their victim, itself a noted flier. Eventually the tern would disgorge its fish, which the gulls appropriated. Only once did I see a tern elude the gulls successfully. There was the normal chase, which the gulls, as usual, seemed to be winning, when suddenly the tern flew back to the flock at Mosque Point, landed among the other terns, and merely threatened the gulls with open bill; and the latter, for some reason, did not care to persist in their attack. The Sooty Gull is normally a scavenger; Brava is the only place where I have seen it parasitizing other species, and even here, I think that its main source of food-supply is carrion (fish remains, etc).

For an illustrated description of this species, see North, "A Field Guide to the Scavenging Birds of Kenya," in this *Journal* for January, 1942.

On 11/8/41, I visited the rocks of Maginnis, and found two nests. These were in small depressions on the flat summits of coral boulders. One was almost unlined; the other had a lining of feathers, pieces of grass and small stones. Each contained one fresh egg (almost certainly an incomplete clutch) measuring 52.5×41.0 and 53.0×40.8 mm. respectively. I spotted one gull incubating from Mosque Point; the other rose from its nest as we reached the island. The birds were very tame; they frequently landed on the summit of a large boulder only ten yards from one of the

nests, uttering their gentle, mewing cry. It was here that the illustrations in the "Field Guide" were taken. On 13/8/41, I found two empty nests on outlying boulders of Mnara. In view of the number of small boys at Brava who like eggs, I should be surprised if this species rears any young locally.

The nest-sites are identical with those described by Jackson for the Kiunga Islands; off the British Somali coast, however, nests are placed under the shelter of bushes (Archer). The Brava eggs are very similar to those figured in Archer (Plate 20), but are more lightly marked, and "stumpier." They are now in the Coryndon Museum. Jackson gives the full clutch as 2 to 3 eggs.

It appears that, apart from Brava, only four breeding haunts of this species are on record—one in the Persian Gulf, one in the Red Sea, and one in the Gulf of Aden (all given by Archer); and lastly, one off the east coast of Africa—in the Kiungas—given by Jackson.

Hydroprogne caspia (Pallas). Caspian Tern.

Not seen at Brava. On 27/10/41, at the mouth of the Juba, I saw a party of about eight, which were conspicuous for their large size, short tails, and huge, red bills. Crown black, back grey, underparts white, legs black. Some Swift Terns, standing near by, were dwarfed by the Caspians. When the latter arose, they uttered a hoarse, squalling, gull-like call. According to Jackson, this species visits the coast of Kenya between October and March, but is rare.

Sterna hirundo Linn. Common Tern.

The shore at Mosque Point was a favourite resting place for terns; a large flock, consisting of several species, could usually be found there. These would normally rise when a walking person came within eighty yards or so. A seated person seemed, however, to be less suspected, so I found that a good way of approaching the birds was to sit down as soon as they showed signs of alarm, then to reduce the distance by crawling, still in a sitting position, using hands and feet, feet foremost. By means of this peculiar means of progression, I managed, on June 5, to approach within forty yards of a mixed flock, which was then studied with a telescope. The sight identification of terns requires intensive observation; the exact colour of the bill and legs are, for instance, essential features, and to decide whether the legs of a certain bird are, say, jet black or black with a trace of red, can be no joke. Comparative size is also important; the fact that one tern is seen to have rather shorter legs than a neighbour, may well show that the two belong to different species. It will thus be clear that the fact that the flock is a *mixed* one, is an invaluable aid to the recognition of its individual members. The inter-identification of what can be called the "Common Tern group" is more exacting than any. Here in East Africa, we have three members—the Common, Roseate and White-cheeked. Often it is hardly possible to distinguish these by visual methods alone; one must collect a bird for scrutiny. Nevertheless, a preliminary sight-investigation often goes a long way towards proving what the subsequent collection finally confirms.

At Mosque Point on June 5, there seemed to be four species present—Swift, Lesser Crested, Roseate and Common. The first two can easily be distinguished by size and other features, and are, therefore, the usual basis for comparisons. After provisionally identifying a number of Roseates (Q.V.), I then noted a single "very similar bird, but with legs perhaps a little shorter, and dark blackish red; colour more greyish above; black

breeding cap; bill black, with red base." This bird, which had white underparts like the Roseates, was probably a Common; if so, what it was doing here in June, and in this plumage, requires explanation.

At the same time, there were a number of terns, again about Roseate size, but with "shorter legs, heavier bill and heavier build; white forehead, dark crown, black bill, dark bar along wing-shoulder, grey upper-parts." At the time, these defeated me completely, and I could not collect any, being then without the necessary implements. But in August, there were still a few about, and on the 12th, I shot and skinned an example which has proved to be a Common Tern in immature, non-breeding plumage. The bird was approximately as described above, but a close examination showed that it had the "bill dark brown, almost black; eye dark; legs brown with a slight pink tinge." The sex could not be ascertained. Measurements (in mm.) are: culmen, from feathering, 38; tarsus, 21; wing; 254; tail, 102 (much abraded and with streamers absent, hence shorter than normal). The upper-parts were grey, but with a white neck-collar, which, at the time, made me think that the bird might be a Bridled, so I neglected to examine the wing and tail features which distinguish the Common from its near relatives. The skin is, however, at the Coryndon Museum, and Dr. Leahey, who has kindly examined it at my request, reports that the outer web of the outer tail feather is dusky, not white as in the Roseate, and that in the inner web of the outer, (second) primary, the white does *not* reach the tip. (In the Roseate and White-cheeked, it does.) The grey mantle of this bird should, of course, have prevented me from confusing it with a Bridled, in which the mantle is sooty. From this evidence, I am satisfied that not only the bird in question, but also those seen on June 5, are immature Common Terns. They strongly resemble the "first winter female" illustrated in Witherby, Vol. V, Plate 129.

There is nothing to show that this species breeds in East Africa; on the contrary, it is a palaeartic nester, which migrates south in winter. In Africa, it is found along the west coast, also "perhaps on the east coast as well" (distributional note in Jackson, page 426, presumably by Sclater). A field note just below, however, clearly by Jackson himself, states that at Kanamai on the Kenya coast "it was not uncommon in September, 1902." But from observations, presumably by Sclater, that follow, it seems that owing both to lack of specimens and of confirmation by subsequent workers, this record of Jackson's has not been fully accepted. Perhaps, in the light of the present notes, it may be decided that the required confirmation has been obtained. Jackson's record is, however, for September, while the bulk of the birds seen by me arrived at an unexpected time—May-June. Beyond pointing this out, I suspend comment, pending the collection of further material.

Sterna dougallii Montagu. Roseate Tern.

When I arrived at Brava in March, 1941, none of the Common Tern group were to be seen. But towards the end of May, many graceful, slender birds of this type, with shortish wings and long tails with streamers, arrived in full breeding plumage. These were identified as Roseates (reasons follow). For some days in the early part of June, Maginnis rocks were a wonderful sight, with hundreds of Roseates concentrated here. One large boulder, in particular, was often white with resting birds, while many others hovered overhead, screaming. This concourse had a formal aspect, being, perhaps, a joyful celebration of the return to the breeding rocks after many months spent elsewhere. It may be that communal displays of this nature are the rule when the terns arrive from migration.

By mid-July, my successor at Brava told me that most of the terns had gone; clearly, therefore, Maginnis was no more than a halting place on the way to their breeding quarters. Notes were not made on the line of migration, but I have no doubt that the objective was the Kiunga Archipelago. If so, it may be asked, why should the birds display at Maginnis? In reply, it may be suggested that on account of the lack of islands along the Somali coast, Maginnis may have been the first Kiunga-like islet that the birds encountered, and was greeted accordingly.

A certain number of birds remained to breed at Brava, although, owing to the too-great accessibility of the islands, most, if not all, of the eggs were taken as soon as laid. Roseates were seen on Chilani from the time of their arrival in May, and on June 16, I found a number of small scrapes which must have belonged to this species, since only they flew scolding overhead. Each scrape had a neat lining of grasses, and was hollowed out of the middle of a grass-tuft about 6 inches high, thus obtaining shelter from wind and cover from view. On the 16th, I found one fresh egg, with dark blotches on a buffy-brown ground, strongly resembling eggs of the Common Tern seen in England. On the 20th, the day before I left Brava, there were no more eggs, so I took this one, but unfortunately broke it before it could be measured. When I returned in August, no birds were breeding on any of the islands, clearly having been "robbed off." A few empty tuft-nests, similar to those at Chilani, were found on Maginnis. A number of birds, still in black-capped breeding plumage, were about on the beaches.

As regards identification, birds were carefully scrutinized on June 5, together with Common Terns. The Roseates were noted as having "bill black, without a trace of red; legs pink. Black crown, pale grey above, white below." On August 12, I shot a typical bird in breeding plumage on the sands near Mnara. (Skin at Coryndon Museum). Details are as follows: Bill, 1.5 mm. of tip brown, remainder bright red; eye dark; legs coral red. A female. Culmen from feathers, 38 mm.; tarsus, 21; wing, 223 (abraded); tail, 154; one streamer broken off. Outer web of remaining streamer almost white. In inner web of outer primary, white does not reach tip, but this is probably due to abrasion. Black crown; under-parts white, with faint, rosy wash. There were eggs in the ovary, the largest of which was 5 mm. across. I think that this must have been one of the birds that was prevented from breeding.

It should be noted that in June, the bills were all black, but in August, they were red with dark tips.

Roseate Terns were found breeding on the Kiungas by Jackson's collector, Baraka, in August, 1906, also, quite recently, by Mr. P. Lees on Kisite Island, off the coast between Mombasa and Tanga (see R. E. Moreau, *Ibis*, January, 1940, page 53).

Sterna repressa Hartert. White-cheeked Tern.

None were seen at Brava until June 7, when a huge flock, all in breeding plumage, was found at Mosque Point. The birds were no doubt on passage towards their Kiunga nesting islands, where Jackson says that they breed in great numbers. In August, a few, still in breeding plumage, were about, but I have no evidence that they nest locally, unless the eggshells 38 and 40 mm. in length, found at El Bakr, belong to them.

This species is the third member of the Common Tern group that is found on the East African coast. When in breeding plumage, it is easy to distinguish from the Common and Roseate, since its under-parts are grey, not white as in the two other species. This feature cannot fail to

strike the eye, no matter whether the bird is in flight or at rest. In winter plumage, the under-parts are stated to become white, which would greatly increase the difficulty of identification. The bird has the same reddish bill and feet as the Common and Roseate, but the legs are shorter, and the body of a standing bird, therefore, looks nearer to the ground. This is a useful comparative feature in a mixed flock.

Sterna bengalensis Lesson. Lesser Crested Tern.

On April 11, about forty birds were present at Mosque Point, together with Swift Terns and Hemprich's Gulls, and they were still here when I left in June. In August, a few remained. Those seen up to June were in full breeding plumage, with an all-black crown. They are easy to distinguish from the nearly-related and rather similar Swift Tern, as follows:—

Feature.	Lesser Crested Tern.	Swift Tern.
Size	Smaller	Larger.
Bill	Orange	Pale yellow.
Upper-parts	Paler	Darker.
Forehead	Black in breeding season.	White in breeding season.

The Lesser Crested Tern cannot be confused with the Common Tern group, on account of its larger size, orange bill and black legs.

Although this tern is "found distributed along the East African coast, there is no record to date of its breeding anywhere in the Indian Ocean, not even in the Lamu Archipelago" (Archer). The fact that birds were seen in breeding plumage in June at Brava, however, makes it appear probable that they subsequently went to the Lamu Archipelago (i.e., the Kiungas) to nest.

Sterna bergii Licht. Swift Tern.

This fine tern is (except for the Caspian) easily the largest found in these waters. Its field characters have been given with those of the Lesser Crested, while an account of the parasitic attentions that it receives from Hemprich's Gull, has been described under that species.

About thirty individuals in breeding plumage were noted in a mixed flock at Mosque Point on April 11. During May, pairs of these birds could be seen at dusk, chasing each other across the sky with hoarse calls and impressive swoops and dives. Such displays were clearly connected with breeding, but by June 21, when I left, nothing more had happened, and when I returned in August, the only birds to be seen were non-breeding individuals with speckled crowns. There is thus no proof of breeding at Brava, but it is more than probable that the Kiungas are utilized.

Sterna albifrons saundersi Hume. Indian Little Tern.

On June 2, I saw this species for the first time, the birds having no doubt just arrived from migration. By the 5th, there were a number distributed in pairs along the beach, between Mosque Point and Mnara. They are easy to recognize, being much smaller than the Common Tern group; in addition, they have a white forehead (even in breeding plumage), and the bill is yellow, with a black tip.

On June 11, I happened to be near Mnara, crossing a plain which lies between the coast and the sandhills. Suddenly, a Little Tern arrived from the direction of the sea, flew steadily inland towards the sandhills, and

disappeared. When a maritime bird like a tern behaves in this way, there is only one likely explanation—that it is breeding. So, on the 13th, I investigated this clue by watching and following the birds, and eventually discovered their nesting ground. This was in an extremely desolate locality on the lower slopes of the sandhills, about a hundred feet above sea-level, and at least a mile from the sea. Above, the great, white sandhills, devoid of all vegetation, rose to a height of 400 feet; below, there was a short drop to the maritime plain. The breeding ground consisted of hard, stony, red sand, with loose horse-shoe drifts of white sand, about 3 feet high, superimposed. These drifts were formed by the south-west monsoon, which, at this time of year, blew unceasingly, creating a perennial sand-storm near ground level. There was hardly any vegetation, except for a few large, isolated bushes, and some tough growths that barely showed above the ground. A more uncongenial-looking breeding locality would be hard to imagine, yet the birds were undoubtedly safer here than if they had been on the much-exploited islands.

I saw about fifteen individuals, but others were no doubt away fishing. Birds kept going off towards the sea, then returning with fish, and chasing each other in pairs, uttering their staccato, double-noted call, "Kitik," and finally landing among the drifts. Clearly, they were going to breed.

Shortly afterwards, I was transferred from Brava, and sent to a station inland. This was all the more unfortunate, because Archer's and Jackson's books inferred that the Little Tern had never been discovered breeding anywhere on the east coast of Africa. Nests of the British form, *S. a. albifrons*, that I had seen in England, were always on beaches near high-tide mark; it was, therefore, curious that the Brava birds should be breeding so far from the sea. However, Archer, quoting Stuart Baker, showed that the Indian form, *S. a. saundersi*, had been frequently found nesting "on sandhills . . . often some way inland." Could the Brava birds, therefore, be *S. a. saundersi*? My leave, in August, enabled me to settle the question.

During a preliminary visit on August 8, I found the birds breeding in a loose, extended colony, the members of which were very wild and vociferous, mobbing me as I approached, and refusing to settle on their nests while I remained in the vicinity. I succeeded in locating one chick only. On the 9th, I took out a party from Brava to help me to search, and we were rewarded by finding no less than six nests with eggs. Five had two eggs each (two clutches fresh, three slightly incubated), and the sixth had one egg (hard set). All were in unlined scrapes in the hard red sand, some of them between the "claws" of the horse-shoe drifts; others in open spaces; one among short vegetation. None were on the drifts, which were unsuitable for the purpose. Although the birds were not watched on to any of the nests, I have no doubt about their identification, as only this species was seen here.

I noted that the sheltered beach and lagoon between Mosque Point and Mnara was a favourite resting and fishing place for the birds. Many were seen flying inland from here; in fact, this seemed to be their normal route between the sea and the breeding colony, although it was quite two miles long. At this beach, on August 12-13, I shot and skinned three specimens. These are undoubtedly *S. a. saundersi*. They have the rump and upper tail-coverts grey, like the back, and the three outer primaries with black shafts. They were in full breeding plumage.

The nestling seen on the 8th was only cursorily examined. It was pale and mottled above, and had a dark bill and flesh-coloured legs.

Eleven eggs taken measure (in mm.) 30.4—35.9 × 22.3—24.1; average, 32.6 × 23.5. They have a stone-coloured ground, overlaid with spots, scrawls and blotches of dark brown, with underlying patches of grey.

All these eggs were blown successfully, then I left them to drain on sawdust in my bedroom, and went to bed, unwisely leaving them unprotected on a table. While I was asleep, some animal (almost certainly a cat) crept in, jumped on to the table, carefully turned over each egg, inserted a claw into the blow-hole, and ripped it open, no doubt expecting nourishment inside. It then departed with one of the three skins, which was covered with arsenic, and may thus have succeeded in doing what I would joyfully have done, if I had awakened in time! The eggs were opened with such skill, that they are not entirely spoilt as scientific specimens, but I have now learnt, at some cost, not to leave these out at night.

The two remaining skins, with most of the eggs, are at the Coryndon Museum. One skin and some of the eggs are to be sent to the British Museum after the war.

On August 10, when between Brava and El Bakr (and some miles away from the first colony) I saw a Little Tern flying inland. This shows that there may be other colonies at intervals along the coast, besides the one already located at Brava.

The breeding habits of *S. a. saundersi* at Karachi (described by Stuart Baker, quoted in Archer) seem very similar to those of the Brava birds. It may be, however, that the Brava eggs resemble those of the British race, *albifrons*, rather than those of the Indian-taken *saundersi*, but the point can only be settled by direct comparison.

(Received for publication on September 20th, 1943.)