evolution of the earlier Hollom field guide which two of the present authors also co-authored and which, unfortunately, did not illustrate all birds occurring in the region.

The introductory chapters are short and to the point (6 pages) dealing with the region and species covered, escapes and introductions, taxonomic sequence and the arrangement of the species accounts and maps. The ABBA project was very pleased to provide detailed information to help prepare the maps (approx half the region covered) and this has been generously acknowledged. The main body of the book is split into two sections, the colour plates and the species accounts. There are 112 colour plates by four different artists. The illustration standard is high and accurate with several exceptionally attractive plates, making it one of the most presentable field guides around. One or two plates are a little crowded but then what field guide does not have this problem. Opposite the plates there is a map with breeding distribution shown in red. Those not breeding have no map and there are no winter or migratory ranges shown. Such matters are covered in the status comments. The size of the maps is very generous in fieldguide terms and they are very clear, allowing accurate distributions to be appreciated. Arabia has now the most accurate maps for this region which is not something that could be claimed before the commencement of the ABBA project. One oddity of the maps is a little box (not explained in the introduction) which shows Socotra slightly out of place and apparently to a different scale. Alongside the maps there are short notes on status and habitat and a species number that corresponds to the plates and the species accounts. The species accounts provide alternative names, size, descriptions including diagnostic features in italics, and voice where important or the species occurs regularly. As might be expected with these authors the illustrations and species accounts are slightly top heavy on raptors but many will see this as an advantage.

The book is finished off with a list for further reading, a full species list and indexes to english and scientific names.

The authors have done a very god job in giving Arabia a proper fieldguide that is a pleasure to hold. Highly recommended.


Survey of Summer Breeding Seabirds in the Saudi Arabian Red Sea

The bulk of Arabia’s Red Sea coastline falls in Saudi Arabia. The abundant lagoons, mangrove swamps and myriad of offshore islands are amongst the most poorly documented ecosystems for breeding birds in the region. A glance at the Interim Atlas shows many gaps in the apparent distribution of seabirds and other breeding waterbirds along the length of the Red Sea. This has largely arisen due to the inclusion of only post-1984 records in the Interim Atlas, whereas the only comprehensive survey of seabirds was undertaken in 1982/83 by a MEPA/IUCN team. It is the latter that formed the basis of the Arabian account in Gallagher et al.’s contribution to ICBP’s landmark publication on the status of the world’s seabirds (Technical Report No. 2, 1984).

Recent events in the Arabian Gulf have shown the importance of having up-to-date knowledge of the location of seabird colonies, numbers of nesting pairs, breeding success and food requirements. This stimulated a wide-ranging reconnaissance survey of Red Sea seabirds by NCWCD during summer 1996. The survey covered the five week period between 1 June and 5 July and comprised 12 aerial surveys, coupled with two spells of groundwork on the Farasan Islands and one at the al Wajh Archipelago. Aerial surveys were planned to cover virtually every island identifiable on all the maps and reports that were available to us, except in the Farasans where a comprehensive survey had been conducted in 1993 by a Manchester Metropolitan University (MMU)/NCWCD team. We were also prohibited from flying in the vicinity of Jedda and in the Gulf of Aqaba, but these restrictions were in areas known to hold relatively few islands. Groundwork was aimed at assessing the effectiveness of aerial surveys and to give some indication of laying dates, clutch sizes and so on. Proof of breeding could be determined from the air for the following species: brown booby, cattle egret, western reef heron, spoonbill, swift tern and lesser crested tern, but could only be inferred for other species. However, we soon learned to read bird-flushing behaviour as a good indicator of likely nesting activity. Overall, seabird counts and habitat data were recorded for a total of 262 count units comprising 310 islands. Apart from the al Wajh Archipelago in the north, most were south of Jedda in the Farasan Bank (approximately al Lith to Shuqaiq), where some were up to 80 km offshore, and the Farasan Archipelago itself. We have yet to tot up the number of ABBA squares! Below we give brief highlights for the principal seabird species and the other colonial waterbirds that nest in the marine environment.

Red-billed tropicbird Phaeton aethereus: Only seen during ground surveys on the eastern Farasan Islands and Jazirat Raykhah (CA29) near al Wajh Town. At least three occupied cliff sites at the latter represent a considerable northerly range extension, on the Arabian side, for this species, though not unexpected as they breed further north in the Egyptian Red Sea. At Farasan, a total of ten were seen on three occasions (maximum four) all within 10 km of Farasan Port (IA10). One occupied hole was located but the estimated breeding population could not be fixed more accurately than 2-5 pairs.

Brown booby Sula leucogaster: Over 8,000 counted during aerial surveys, with 590 nesting pairs recorded on 19 islands along the length of the Red Sea up to 28°N, excluding Farasan where the first eggs were laid during the last few days of the survey. Elsewhere the stage of nesting was highly variable, but mostly small to medium chicks in the north and eggs and small chicks at southern colonies. Nest sites varied from sandy beaches to flat, rocky island tops to sea cliffs. Some colonies near Kunfuda, active in Jan/Feb 1996, were again active in June/July.

Little green heron Butorides striatus: Mostly recorded during ground surveys at al Wajh and Farasan; at the latter many nests were in Euphorbia thickets beneath active Western Reef Heron and Spoonbill nests.

Cattle egret Bubulcus ibis: Two large colonies were active in the Kunfuda area and a smaller one near al Lith. 1050 nests were recorded with 1900 birds present at the three colonies.
Western reef heron *Egretta gularis*: Nesting recorded from the al Wajh Archipelago to the southernmost Farasans. The size of the breeding population could not be assessed accurately from the air as many pairs nest sub-canopy in the mangroves.

Spoonbill *Platalea leucorodia*: A total of 22 proven or probable colonies were identified from the air involving a minimum of 103 pairs. The total count was 280 with birds, recorded as far north as 28°. Nesting was most frequent south of Jeddah, both on the Farasans and around al Lith. Only a single nest was seen in the north, near Umm Lajj Town (DA26).

Crab plover *Dromas ardeola*: We were unable to locate colonies from the air, including the one discovered on West Mandhar (Farasan, HB10) in 1993 by the MMU team. A new active colony was discovered on one of the inner islands in the al Wajh Archipelago (CB28). The colony on Murain (IA09) in the SE Farasans appeared deserted with a high density of cat tracks in the vicinity.

Sooty gull *Larus hemprichii*: A widely distributed species, most numerous in the Kunfuda and al Wajh areas. Breeding hard to prove from the air, though pairs flying from under bushes and amongst vegetation highly indicative of nesting. Many pairs at three colonies in the al Wajh area were already incubating by 23-26 June, whereas on Farasan the first eggs were being laid at the end of the month many were on eggs. Breeding was earlier at al Wajh, with running chicks recorded on 23 June (CA29).

White-eyed gull *Larus leucophthalmus*: Widespread and slightly more numerous than sooty gulls and with a greater tendency towards coloniality. Many pairs at three colonies in the al Wajh area were already incubating by 23-26 June, whereas on Farasan the first eggs were being laid at the end of the month or in early July. Most nests were in open sandy or gravelly situations.

Swift tern *Sterna bergii*: The majority of birds were associated with eight major colonies on the Farasan Bank. Numbers of nests per colony ranged between 100 and 700 and three were adjacent to lesser crested tern colonies. In the north only one definite (30 pairs) and one probable colony (15 pairs) were identified in the al Wajh area.

Lesser crested tern *Sterna bengalensis*: More numerous than swift terns but only 25% of birds counted were associated with the five identified colonies; all the latter were on the Farasan Bank. Colony size ranged between 60 and 550 nests. One interpretation of the scarcity of colonies may be that the main breeding season does not get underway until later in July.

White-cheeked tern *Sterna repressa*: Most common on inshore islands and the Farasan Archipelago. Colonies could not be reliably located from the air though most flocks rising from sandy or gravelly substrates above the high water mark probably represented nesting locations. Small colonies (10-50 pairs) are often located on islands with large brided tern populations and these were often overlooked from the air. Egg laying commenced in late May on Farasan, with clutches ranging from one to three but averaging 1.6-1.8 in different colonies. Greater variation in clutch size was recorded in the al Wajh Archipelago (means 1.1-2.1) though lower values could reflect re-lays after original clutches had been collected by local fishermen.

Bridled tern *Sterna anaethetus*: The most abundant and widespread breeding seabird. The aerial count total of just under 20,000 is likely to be a gross underestimate. Most nests were under bushes but a few small colonies on Farasan use rock overhangs on cliffs in the absence of vegetation. Both the al Wajh and Farasan Archipelagoes hold large populations and the species is abundant on the well vegetated outer islands of the Farasan Bank where it co-occurs with the brown noddie. Clutches were always of a single egg and hatching commenced in mid June.

Brown noddie *Anous stolidus*: A total of 8,700 were counted from the air on islands of the Farasan Bank and Archipelago. Breeding occurred on 17 of the 37 islands where the species was recorded; virtually all colony islands had dense cover (>70%) of tall *Suaeda fruticosa* bushes. The only exception was Abu Shugur on Farasan where they utilize mangroves. At the latter colony nesting seemed fairly asynchronous, with both eggs and large chicks (out of the nest) present on 30 June.

Other species: Summer breeding was not proven for pink-backed pelican *Pelecanus rubeculans* mostly occurring in winter (see Newton & Symens, *Colonial Waterbirds* 19: 56-64, 1996); purple heron *Ardea purpurea*, good numbers seen around Qishran mangroves near al Lith; goliath heron *Ardea goliath*, most recorded south of Jeddah but at least eight present at the al Wajh archipelago; Caspian tern *Sterna caspia*, usually a late winter nester and Saunderson’s little tern *Sterna sandersi* on Farasan most clutches are initiated in April. Over-summering grey heron *Ardea cinerea* were widely recorded. One intriguing aerial observation was of a single adult masked booby *Sula dactylatra* “sitting” on top of a bush on one of the ‘outer Farasan Bank islands; three or four low passes were made before the bird reluctantly flushed. The species has been recorded nesting in trees in other parts of the world, so could this constitute the first possible breeding record for Saudi Arabia?

Overview: Over 66,500 waterbirds were recorded during aerial surveys, but comparative pairs of aerial and ground counts indicate that the former underestimate actual populations and the overall total present may approach 200,000. This total could include 77,400 pairs of true seabirds. No major changes were apparent between 1993 and 1996 surveys on the Farasan Islands. Methodology and timing of surveys were markedly different between 1982/83 and 1996 but there are indications of major increases in both gulls, swift, white-cheeked and bridled terns, and relative stability in brown boobies, lesser crested terns and brown noddies. A more detailed analysis of trends on an island by island basis will be prepared after both datasets are entered into the ABBA database.