

Namibia Coastal/Marine Bird News 8

Newsletter of the Namibia Coastal/Marine Bird Working Group

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10 YEARS OF TERN RINGING AT MILE 4 SALT PANS

Mark Boorman, email felix@mweb.com.na

The Mile 4 Salt Pans are a series of man-made pans created for the harvesting of salt for human consumption, situated just north of Swakopmund. These pans host resident birds, intra-African and Palearctic migrants. Approximately 25-30 species are represented and at times significant numbers of certain species can be found here. The pans are used as feeding areas as well as a diurnal and nocturnal roost site. They are also used as a staging-post for flamingos and a number of species of waders and terns. The shallow water with protruding salt mounds makes a particularly attractive roost site for terns, presumably as they feel safer from predation by jackal and hyaena. Ringing of waders was started here by Rod Braby in the early 90's and I inherited this job from him. However, a season of tern ringing convinced me that this is what I should focus on.

Numbers of birds using the roost normally peak between October and December. This coincides with the heaviest migration and is also the time when food is plentiful in the vicinity. Large roosts can sometimes be seen during the day but it is at night that the really large numbers are present. Black Tern in particular spend most of their daylight hours at sea.

Mist nets are erected in the late afternoon close to where the birds have been found to roost. We also try to anticipate the flight path that they will take when they fly into the roosts. As it needs to be as dark as possible to catch these birds, we can only set up netting in the period from 4 days after full moon until 10 days before the next full moon. A sound system is also set up adjacent to the mist nets. This is used to reproduce contact calls of the various species which serves as a lure and usually brings the birds closer to the nets.



Top: Masses of terns at Mile 4 Salt Pans (photo Mark Boorman); Centre: Mark Boorman sets up his equipment (photo Leif Sandgren); Bottom: Mark releases a ringed tern (photo Dirk Heinrich); Inset: Close-up of the ring used on terns (photo: Mark Boorman)

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For previous issues see http://www.nacoma.org.na/Our_Coast/FaunaFlora.htm (bottom of page) and www.nnf.org.na/coastalbirds.htm and <http://www.frantic-naturalist.com>



Once the birds are caught in the mist nets they are removed and placed in keep cages. These cages are then taken to ringing station for the birds to be processed. Any other species caught will also be taken for ringing. The nets are visited approximately every 20 minutes and freshly caught birds removed. Numbers of birds caught are dependent on the numbers using the roost, which is again dependent on the food source.

All birds caught will firstly receive a metal ring (see photo on page 1). The rings used by us for these types of birds are all either stainless steel or monel, which are far more durable than aluminium rings which are also available. Each ring is individually numbered. Depend-ent on the species, various details will be recorded. One of these is total head and bill length. This can be used to separate about 60% of the adults into sex. All the data recorded will be sent to Safring at the University of Cape Town, which keeps records of all birds ringed under their scheme.

Particular interest is taken in primary moult. This can tell us the ageing and also is helpful in separating species. Arctic Tern undergo a "straight" moult from P1 to P10, whereas Common Tern have a sequential moult. This means that several nodes can be active at one time.

If a bird is caught that is already ringed, additional information is recorded. A series of photos is taken to confirm the ring number. Some rings become quite severely corroded and worn so that you can hardly read the number. A second Safring ring is also added. We've had four instances of birds already carrying two rings. The wing and rump are particularly pertinent for separating Common and Arctic Tern. In the past we have had claims that the original ringer has ringed the bird as a chick as an Arctic Tern, and when we recapture it is a Common Tern.

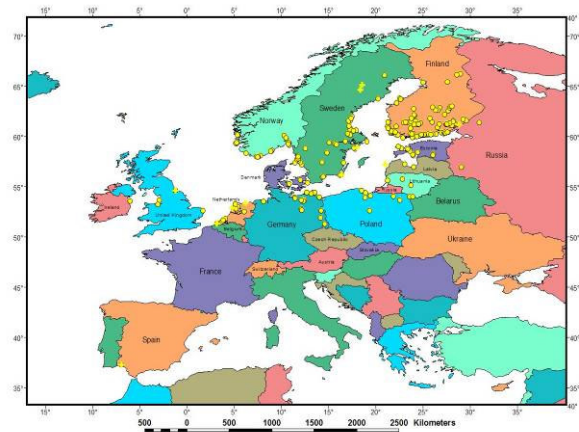
Birds are released immediately they have been processed. Terns are easily stressed and need to be processed as quickly as possible.

In excess of 10,000 terns have been caught at this site:

Arctic	83
Black	2019 (19%)
Common	8402 (78%)
Sandwich	224
Swift	85

Interestingly, the number of Arctic Tern in proportion to Common reflects the often-used 1%. These two species are difficult to tell apart in the field although a lot easier when in the hand. There is a habit of labelling these two species as Comic Terns for the purposes of bird counts, though obviously the actual numbers of Arctic Tern present are really inconsequential.

Some 330 Common Tern have been caught which had foreign rings. This shows that the birds using this roost are predominantly of Baltic Sea origin. From other records of ringed birds it is also shown that birds of a more eastern origin will migrate down the east coast of Africa. Of interest is the bird ringed in Ghana. This bird was caught at Mile 4 some three weeks after having



Common Tern are predominantly of Baltic Sea origin.

been caught in Ghana. When caught in Ghana it was showing a suspended moult. This means that it had started the moult on the breeding grounds but then stopped it for the migration. By the time that we caught the same bird it was again in active moult. 73 Common Tern ringed at Mile 4 have been either re-caught or found dead in the northern hemisphere.

Common Tern Recoveries/Controls

Finland 122	Belgium 22
Sweden 49	Netherlands 12
Germany 39	Sweden 9
Norway 27	Finland 6
Belgium 17	Denmark 4
United K 17	Germany 3
Estonia 16	Norway 3
Netherlands 10	Senegal 3
Lithuania 9	Spain 3
Spain 7	Ghana 2
Latvia 5	UK 2
Poland 5	France 1
Denmark 2	Latvia 1
Ghana 1	Lithuania 1
Russia 1	Russia 1
Senegal 1	

Just 5 Black Tern with foreign rings have been processed, one each from Italy, Latvia and Greece. Not shown are two birds ringed in Senegal. In addition, a bird ringed at Mile 4 was caught in Spain and another shot in the Ukraine. Prior to this Latvian recovery it was assumed that "our" birds were Black/Caspian Sea origin.

Black Tern Recoveries/Controls

Senegal 2	Spain 1
Italy 1	Ukraine 1
Latvia 1	
Greece 1	

Interestingly, a Dutch researcher has recorded a bird that was caught in Greece on its "northerly" migration and in August of the same year in Holland on its southern journey. We obviously have little understanding of these birds' migratory routes. Sandwich Tern data show that the population represented here is mainly of Baltic Sea origin.

Thank you to everyone who has braved the long cold nights with me, and to the owners and staff of Mile 4 salt works, especially the Klein family.



Mile 4 Saltworks/Salt Pans, an Important Bird Area on the Namibian coast (photo Mark Boorman)



The salt pans are a safe haven for both Greater and Lesser Flamingo, including juveniles (photo Ann Scott)

COASTAL/MARINE IMPORTANT BIRD AREAS OF NAMIBIA

Source: Simmons RE, Boix-Hinzen C, Barnes KN, Jarvis AM & Robertson A 1998. In: Barnes, KN (ed.) *The Important Bird Areas of southern Africa. BirdLife South Africa, Johannesburg.*

Important Bird Areas (IBAs) are sets of sites in various countries throughout the world that are considered to be critically important for birds at a global scale. These sites are selected according to a set of criteria (standards) determined by BirdLife International. The aims of the IBA Programme are to:

- Protect bird species
- Protect bird sites
- Protect the wider environment.

12 of the 21 IBAs in Namibia are coastal or marine:

N001	<i>Cunene River Mouth</i>
N002	Epupa-Ruacana
N003	Eastern Caprivi Wetlands
N004	Mahango Game Reserve & Kavango River
N005	Etosha National Park
N006	Hobtere
N007	Bushmanland Pan System
N008	Waterberg Plateau Park
N009	Brandberg Mountain
N010	<i>Cape Cross Lagoon</i>
N011	<i>Namib-Naukluft Park</i>
N012	<i>Mile 4 Saltworks</i>
N013	<i>30 km beach: Walvis Bay - Swakopmund</i>
N014	<i>Walvis Bay</i>
N015	<i>Sandwich Harbour</i>
N016	Hardap Nature Reserve
N017	<i>Mercury Island</i>
N018	<i>Ichaboe Island</i>
N019	<i>Lüderitz Bay Islands</i>
N020	<i>Possession Island</i>
N021	<i>Sperrgebiet</i>

N012 Mile 4 Saltworks/Salt Pans

22 39S; 14 33E; 3 400 ha
Fully Protected, Global IBA (A1, A4i, iii)

This coastal area comprises a private nature reserve of 400 ha and a salt works. It lies adjacent to the sea on

the central Namib Desert coast and has been extensively altered to create numerous evaporation ponds. Immediately inland lie the gravel plains of the Namib Desert. The salt works are situated about 7 km north of Swakopmund. Production of the concentrated brine at the salt pan, known as Panther Beacon, began in 1933, but by 1952 the salt source was exhausted. Seawater has since been pumped into open evaporation and concentration ponds from which crystallized salt is removed with mechanical scrapers. The pans are shallow and of varying salinity. A large wooden commercial guano platform covering 31 000 m² has been built in one of the northern pans. Apart from a few halophytes, the salt works are devoid of vegetation.

Mile 4 occasionally supports massive numbers of waterbirds and the guano platform has supported up to 700 000 Cape Cormorant in the past; an average of 45 000 birds has been supported in recent years. Cormorants aside, the area may support more than 50 000 other waterbirds, including Greater Flamingo and Lesser Flamingo, African Black Oystercatcher, and up to 100 000 Common Tern. Breeding species include Damara Tern, Chestnutbanded Plover, Kelp Gull, Hartlaub's Gull and Caspian Tern.

In 1997, the area witnessed the first recorded attempt of Greater and Lesser Flamingo breeding in coastal areas. Just over 100 nests were built in the salt pan and eggs were laid, but presumed disturbance by blackbacked jackal led to early failure. Recent breeding attempts on islands in the salt pans by Bank Cormorants and the occurrence and possible breeding of the near-endemic Gray's Lark, immediately inland, add to the reserve's importance. Brown hyaena are also found in the area.

The Richwater Oyster Company has been cultivating oysters in the pan since 1985. Oyster production and guano scraping appears to be compatible with maintaining good populations of wetland birds, judging by the large numbers present, and the breeding of terns, cormorants and plovers in and around the salt works. The value of these commercial salt pans for waders and other birds is obvious from biannual wetland counts (up to 93 000 birds of c. 35 species at any one time).

POPULATION TRENDS IN SOME OF NAMIBIA'S COASTAL TERN SPECIES, 1990-2008 (Part III)

Holger Kolberg, Directorate Scientific Services, MET, email holgerk@mweb.com.na

Ed: Population trends of the Damara Tern, Common Tern and Caspian Tern were presented and analysed in newsletter No. 6, p3-4; and Sandwich Tern and Swift Tern in No. 7, p4. Please see newsletter No. 5, p3 for details of the methodology and interpretation.

Black Tern (*Chlidonias niger*)

Red Data Book Status: Namibia - ?, International – least concern.

Wetlands International population trend: declining.

There are 51 counts at 12 sites on record for Black Tern since 1990. The highest average of 62965 individuals was achieved in 2001 when four sites were counted (**Error! Reference source not found.**). Five sites were counted in 1992 and 1997 yielding 231 and 4256 birds respectively. Only two sites, Sandwich Harbour (51%) and Walvis Bay (36%), account for most of the birds seen.

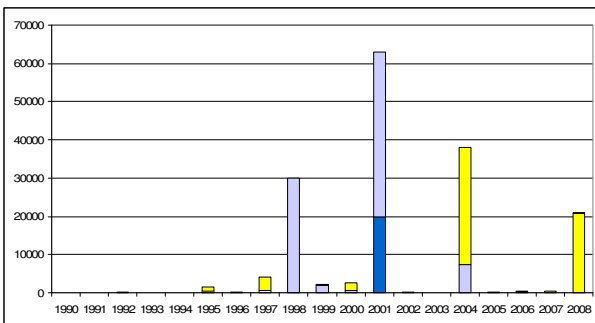


Fig. 1: Average number of Black Tern counted per year from 1990 to 2008.

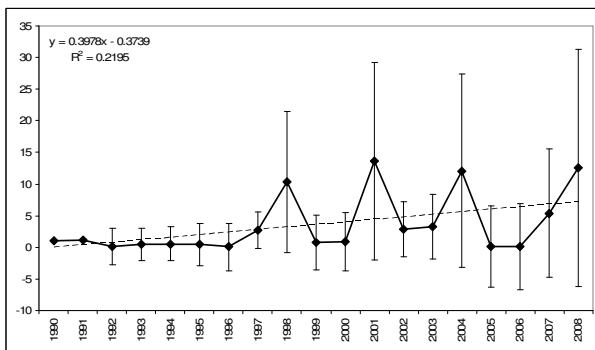


Fig. 2: Trends in Black Tern populations using 1990 as the base time.

Trend Analysis:

Number of sites	2
Number of years	19
Number of observed counts	26
Number of missing counts	12

Results for the linear trend model using 1990 as the base time give the following goodness of fit values:

Chi-square 487262.54, df 23, p 0.0000
Likelihood Ratio 359527.31, df 23, p 0.0000
AIC (up to a constant) 359481.31

Wald-test for significance of slope parameter:

Wald-Test 1.73, df 1, p 0.1889

Overall slope: uncertain

White-winged Tern (*Chlidonias leucopterus*)

Red Data Book Status: Namibia - ?, International – least concern.

Wetlands International population trend: stable?

There are 138 counts at 34 sites on record for White-winged Tern since 1990. The highest average of 687 individuals was achieved in 1998 when nine sites were counted (**Error! Reference source not found.**). Fifteen sites were counted in 1995 and 623 birds were seen. Two sites, Lake Oponono (13%) and Walvis Bay (46%), account for most of the birds seen.

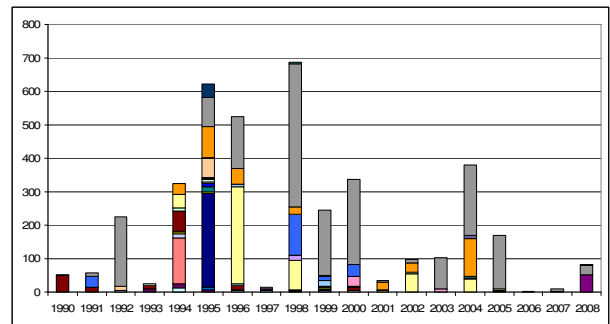


Fig. 3: Average number of White-winged Tern counted per year from 1990 to 2008.

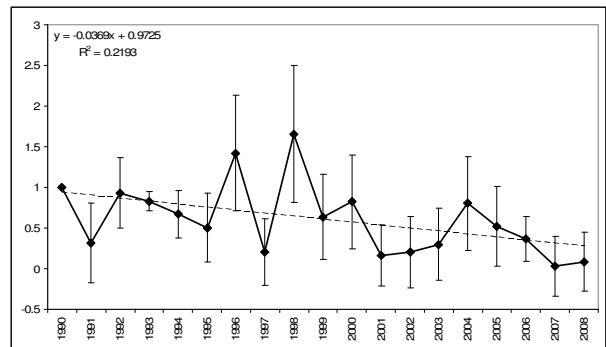


Fig. 4: Trends in White-winged Tern populations using 1990 as the base time.

Trend Analysis:

Number of sites	2
Number of years	19
Number of observed counts	26
Number of missing counts	12

Results for the linear trend model using 1990 as the base time give the following goodness of fit values:

Chi-square 2747.07, df 23, p 0.0000
Likelihood Ratio 2660.05, df 23, p 0.0000
AIC (up to a constant) 2614.05

Wald-test for significance of slope parameter:

Wald-Test 1.79, df 1, p 0.1806

Overall slope: uncertain

NEWSFLASHES & PHOTO GALLERY

Please note our updated [website address](http://www.nnf.org.na/coastalbirds.htm):
www.nnf.org.na/coastalbirds.htm - thanks, Alice!

Poster series on Namibia's threatened bird species

A reminder that the new set of three posters on Namibia's threatened bird species has been completed. The series features the attractive artwork of well-known local artist Christine Marais and focuses on coastal/ marine birds, cranes/inland wetland birds and raptors. The project is funded by the GEF Small Grants Programme and the NACOMA Project. Please contact us at ecoserve@iway.na for details of where you may collect your copies of these posters – unfortunately too heavy to send by post!

Beach Count: Dolphin Park to Bird Island

Peter & Marilyn Bridgeford email pmbridge@iway.na
Together with Barbara Paterson, Peter & Marilyn counted 1 287 birds along the above stretch of coast on 9/4/09. On the rocky beach they counted 909 birds, with 378 on the sandy beach. The highest counts were for Kelp Gull (647) and Cape Cormorant (373). Other interesting counts were for Crowned Cormorant (17), African Black Oystercatcher (5), Black-necked Grebe (4), Sandwich Tern (68), Swift Tern (1) and African Pied Wagtail (3).

Juvenile flamingos



Juvenile Greater Flamingos at Mile 4 Saltworks – note darker, younger bird on left (photo Ann Scott)

Ann & Mike Scott, email ecoserve@iway.na

On 30/5/09 we saw a number of young Greater and Lesser Flamingos at Mile 4 Saltworks at Swakopmund. They appeared to be in two age classes (see attached photograph). Would these be for different years? If so, could the two larger, whiter birds on the right be subadults, from 2008 (or 2007?), and the smaller, darker bird on the left a newly fledged 2009 bird? We were wondering where these "fledglings" could have come from - possibly Etosha?

Wilferd Versfeld, email versfeld@mweb.com.na

Flamingos can stay grey for a couple of years, so the smallest one should be/could be from last year, possibly Etosha as they bred early in Sua Pan, and then the bigger ones from the years before. If the small one is from this year I have no idea where it came from - Sua Pan probably.

Hu Berry, email ecoguide@iway.na

I'm not an authority on estimating age of flamingos, however I think we must bear in mind that they are probably long-lived birds. The estimated age of the oldest captive bird in Basle Zoo was about 40 years. I mention this because they may take longer to reach full adult plumage

than we expect. Consequently, flamingos may take several years to acquire full adult plumage. Hence the bird on the left may be from a late 2008 breeding and the 2 birds on the right may be older than 1-2 years. Botswana also had successful breeding of flamingos in 2008, on Soa (Sua) Pan. When Conny and I hand-reared Lessers and Greaters to the fledging stage in Okaukuejo, we observed that they took much longer than we expected to lose their downiness, but this may have been due to the artificial diet (Pro-Nutro).

Pelicans



Adult White Pelican – note ring on left leg
(photo Pete & Marilyn Bridgeford);
Inset: juvenile White Pelican (photo Susann Kinghorn)

Peter & Marilyn Bridgeford, email pmbridge@iway.na

An interesting great White Pelican ringing return: the chick was ringed on the Bird Platform by Hu Berry on 30/12/72. It was seen by Mark Boorman at the Raft Restaurant in Walvis Bay on 21/2/03. He read the ring with the aid of a telescope. On 15/5/09 we caught the pelican while being fed at the Anchor's Restaurant at the Walvis Bay small crafts jetty. Time elapsed 13 285 days (over 36 years), distance 12 kms, making it one of the oldest known pelicans. This bird seems to have a thing about restaurants

Plovers



Susann Kinghorn, email susannkinghorn@gmail.com
Attached please find this photo of a White-fronted Plover, which I took at Mile 10.

Dirk Heinrich, email photographer@mweb.com.na

A Kittlitz's Plover was recapped at the Swakop River Mouth on 12/4/09, which was ringed at the sports field in Vineta by Mark Boorman in October 2007.