

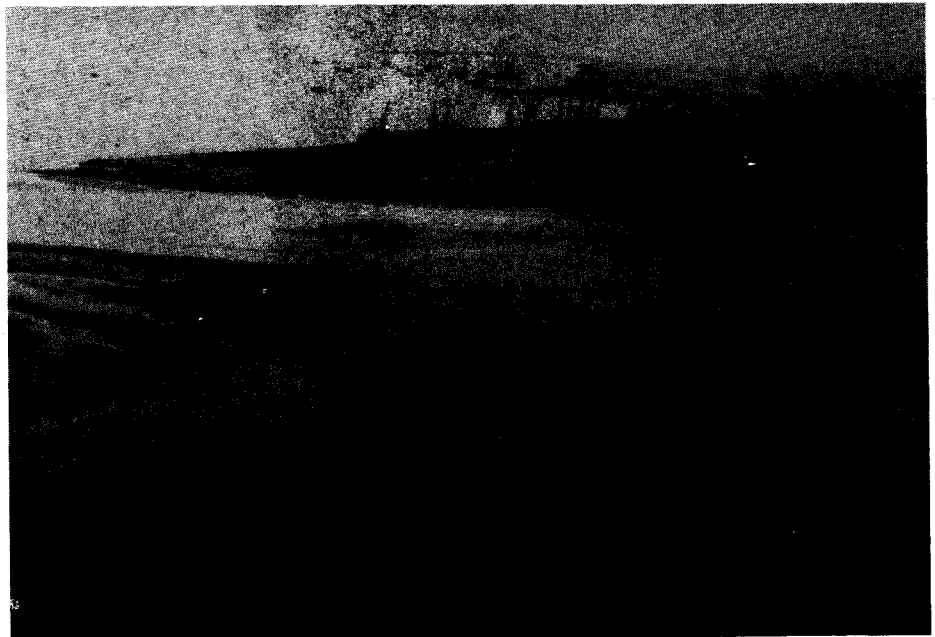
# Walvis Bay's Wetlands Conservation Project

Walvis Bay Round Table believes in the conservation of habitats and species not only for their own sakes, but also for the utilization and enjoyment of all mankind. Conservation and development must be positively linked if man is to achieve longterm survival in a pleasant environment. With this philosophy in mind, Walvis Bay R.T. No. 36 initiated a research and monitoring project on the Walvis Bay Lagoon in 1982. The aims of this project are (i) to determine the importance of the lagoon for purposes of conservation and recreation, (ii) to determine the effects of past development (no environmental impact studies having been undertaken at the time) on the system, (iii) to draw to the attention of, and to educate the population of Walvis Bay (particularly children) to appreciate and understand the importance of the wonders on their doorstep and (iv) to monitor the system so that any changes can be quickly identified and investigated.

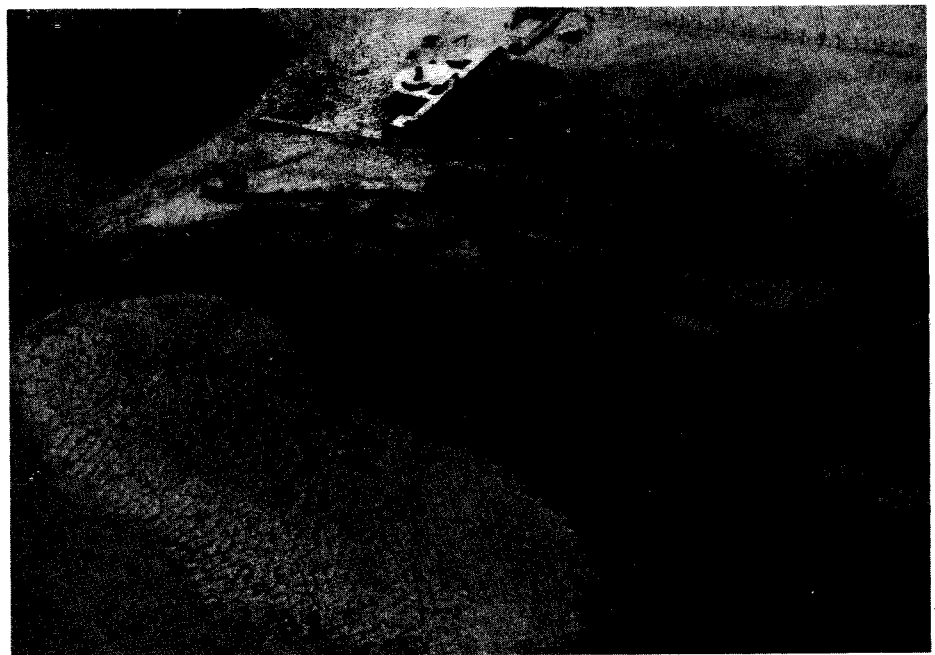
The wading birds are used as the indicator group to determine the importance of Walvis Bay to conservation and also to monitor the system. Bird counts have been made since 1983, initially by two research officers from the FitzPatrick Institute, University of Cape Town and then by the Bird Group of the S.W.A. Scientific Society in conjunction with the Directorate of Nature Conservation's two ornithologists. We are now in a position to answer some of the questions implied in the aims of this study.

Concern for the survival of Walvis Bay centres around the encroachment on the flooded tidal mud flats of the lagoon, mainly by housing projects, roadways and salt works. The area of mud flats has been reduced dramatically in recent years and this has been implicated in the silting up of the lagoon, necessitating large-scale dredging operations. It appears that, by decreasing the flooding area and hence the volume of water entering and leaving the lagoon at each tide, the scouring effect of the water on windblown sand entering the system has been reduced. The lagoon is therefore filling up with sand.

Walvis Bay Lagoon is a large natural tidal inlet. There is only one other similar site on the Southern African coast north of Luderitz, namely the Sandwich Harbour Lagoon. The latter enjoys a satisfactory level of conservation protection, but at Walvis Bay certain developmental projects give considerable cause for concern regarding the future survival of this important wetland.



*View of Wetlands with Walvis Bay in background. Note point area.*



*Detail of Point Area showing silting-up at this very important section as it is the main outlet of the lagoon. This silt has moved further out to sea since the photograph was taken.*

One may ask, in view of the fact that South West Africa/Namibia has approximately 1 400 km of coastline, what is so important about this small section of perhaps 15 km of water frontage? The answer to this lies in the generally sheer coastline of Africa compared to most other continents. Because of this the coast is heavily pounded by waves which, as they break, scour the shore, shifting sand and eroding rock. The more violent the waves, the greater the effect, so

on rough beaches only coarse sand is left, while in sheltered lagoons the sediment is fine and more stable. It is not surprising, therefore, that sandy beaches with their very unstable substrate support relatively few invertebrate species. Sheltered lagoons, on the other hand, can be extremely productive. For instance, where shellfish are harvested from lagoons in Europe and North America an annual yield of 7 800 kg of mussels, 3 700 kg of cockles and 400 kg

of oysters may be obtained from each hectare. By comparison, stockfarming yields about 18 kg of mutton per hectare. Reasons for the high productivity of lagoons include the fine, relatively stable sediment which can be colonised by large numbers and diverse groups of invertebrates, the relatively gentle water movement carrying in food and oxygen during the rising tide and removing waste products during the ebbing tide, and the fact that lagoons act as "nutrient traps", gaining nutrients from both rivers (in the case of Walvis Bay, the occasional flooding of the Kuiseb River) and the sea. Lagoons are therefore many hundreds of times more productive than sandy beaches and this is evidenced in the numbers of predators, mainly birds, which feed on the invertebrates in the two different habitats. For instance, a 15 km stretch of sandy beach adjacent to Walvis Bay supports about 750 birds belonging to 12 different species. By contrast, the Walvis Bay Lagoon (consisting of about 15 km of water frontage) supports about 80 000 birds belonging to 34 species.

In wetland habitats, wading birds which feed on invertebrates can be used as indicators of the health of that wetland; any change in water conditions (e.g. salinity, turbidity, chemical composition, temperature) or the character of the substrate (e.g. sedimentation by coarser sand) will have an effect on the invertebrate populations and this will, in turn, be reflected in either the numbers of wading birds or their species composition.

Walvis Bay Lagoon is indeed a wetland of national and international value. For instance, 24 000 or more Lesser Flamingos may be counted in the area, representing 71% of the Southern African population. Other examples include 1 000 White Pelicans or 34% of the S.A. population, 2 000 Avocets or 26% of the S.A. population, 2 000 Chestnutbanded Plovers or 77% of the S.A. population etc. In addition, many waders are migrants, breeding in the arctic regions and completing a round trip of about 28 000 km each year. Huge tracts of land in their breeding ranges in Siberia and Greenland have been set aside as nature reserves. This is futile, however, unless similar wetland protection is created in the southern hemisphere to preserve their feeding grounds. The Walvis Bay Lagoon is one of the most important wintering grounds for the Curlew Sandpiper in Africa; over 14 000 of these birds gather there each year. We have, therefore, an international responsibility to conserve adequate habitat for these migrant visitors.

Apart from birds, lagoons provide sheltered food-rich havens for many fish; over 400 species in Southern Africa frequent lagoons and estuaries at some time of their lives. The best known are probably the kob, steenbras, stumpnose and several species of gamefish. Healthy lagoons are important nursery grounds for many fish (as well as prawns) and in view of the popularity of angling on our coast, this alone makes the



*Our Bird Counting Team:*

*From Left to Right*

*Back: Dieter Ludwig (Amateur Counter), Dr Tony Williams (Head Ornithologist for State SWA), Ben van Vuuren (S.W.A. Conservator), Friend, Piet Mostert (Conservator and Tabler), Chris Brown (Ornithologist SWA and Tabler).*

*Front: John Patterson (Conservator SWA), Ulf Schaefer (Table Convenor Walvis Wetlands), Dr Paul Coulson (Walvis 41'er and Past Convenor).*

Walvis Bay Lagoon worthy of conservation.

The town of Walvis Bay benefits from the abundant birdlife, excellent fishing and wide range of watersports on and about its lagoon and these help to generate a healthy state of tourism. But is this all that would suffer if the lagoon were to silt up? Perhaps not. The town of Walvis Bay fights continuously against the encroaching dunes of the Namib. Respite from sand infiltration is at present provided to the south of the town by the lagoon which traps and sweeps the setting sand into the bay with each tide. Upset this balance, lose this lagoon, and Walvis Bay will be a sandier place to live in. The great sand dunes of the Namib Desert cannot be expected to detour around the town.

Finally, it should be mentioned that the Walvis Bay wetland project was accepted this year as a South West Africa area project. With the additional funds and support that have been obtained, more intensive actions have now become possible. At present we are investigating the possibility of contributing towards a hydrological study of the lagoon and the construction of an open air education area on the edge of the lagoon. Whatever the outcome, Round Table in South West Africa stands united in its determination to conserve the natural beauty and develop the economy of this country in such a way that future generations can look back with pride at what we are trying to achieve.

*Christopher J. Brown  
Hochland Round Table No. 154*

## Thomo School

### Genesis

It was sometime in 1983 that the circumstances of Thomo School were brought to the attention of Round Table 22. To be fair (this once only) to all concerned, the proposed project was not really pressed. To those that knew, the task was huge. To those not in the know, other matters pressed more upon their attention.

As usual with Table concerns, one or two had sunk their teeth into this project, and like Jack Russel Terriers, they refused to be drawn from the warren after catching sight of the rabbit.

By 1984, Table had been coerced into sending emissaries to the school. They returned with stories of classes held in wooden shacks; a shift system for pupils; overcrowding and generally unsatisfactory conditions. A machine capable of making four bricks at a time was purchased for the sum of R300,00. A further amount of R500,00 was put aside for the purchase of cement. Wooden pallets upon which to make and mature the bricks were begged, borrowed and materialised — Table was going to build a wing of four classrooms.

The new wing, twenty eight metres long by six wide, was to replace the four shanties in use. Fund raising was under way, the initial tools and supplies available, all was well. Then the project convenor was transferred. Luckily his brother was available to take over responsibility (little was it known that he too was soon to leave). In November