

CADBANK, A DATABANK OF COASTAL AVIFAUNAL CENSUSES  
IN SOUTHERN AFRICA

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CADBANK, (Coastal Avifauna Databank) incorporates post-1975 censuses of birds at coastal wetlands, on the shore, and on offshore islands between the Kunene River and Kosi Bay. The databank may be accessed by conservation bodies and researchers. The FORTRAN programs that generate the databank are available for similar applications.

INTRODUCTION

The Western Cape Wader Study Group and the Percy FitzPatrick Institute of African Ornithology have mounted a series of expeditions in southern Africa, with the chief purpose of gathering census data on coastal birds during the southern summer. Much of these data have already been published in full (Summers *et al.*, 1976, Underhill & Whitelaw, 1977, Underhill *et al.*, 1980). Summaries of the expeditions to Natal and the Skeleton Coast are in press or in preparation (Ryan *et al.*, in press, Ryan *et al.*, in preparation). The data from all these expeditions, together with data from the northern Cape (January 1980) and the southwestern Cape (December 1980/January 1981) and numerous other counts, are available in detail in the databank.

THE DATA BANK

The databank is split into four sections: coastal wetlands, the shore, offshore islands and Langebaan Lagoon. Coastal wetlands are loosely defined as estuaries, inlets, lagoons, vleis, sewage works, saltworks and other saline and freshwater habitats that appear to be sufficiently close to the coastline that they can be utilized by shorebirds. Censuses are available for 296 coastal wetlands - at 21 of these more than 5 000 waterbirds were recorded, and 75 have more than 250 birds.

For counting purposes, the coastline is split into roughly homogeneous sections based on physical characteristics (cliff, rocky shore, sandy beach, mixed rock and sand, wavecut platforms, the presence or absence of kelp deposits, etc.). On long featureless shorelines, a standard section of 5 km in length has frequently been adopted. Most sections are between 2 and 10 km in length. The databank contains counts for a total of 885 such sections.

Counts are available for 30 offshore islands and rocks. These counts include estimates of the numbers of breeding seabirds. The summer and winter counts for Langebaan Lagoon are, for reasons of bulk, kept separately from the other wetlands. This series of counts, unbroken since 1975, is an ongoing project of the Western Cape Wader Study Group.

All species of birds generally associated with aquatic habitats are included in the counts. Essentially oceanic seabirds, for example, gannets and penguins, are however excluded from the wetland and coastal sections of the databank. For each count, the databank includes details of date, time, state of tide, names of observers and the 1:50 000 map for the locality. A set of maps, on which the exact boundaries of the sections are clearly marked, is also maintained.

There is 100% coverage from the Kunene River to Sandwich Harbour. Apart from several sections near Lüderitz and the offshore islands, there are no counts between Sandwich Harbour and the Orange River estuary. From the northern Cape to the Olifants River estuary there is 40% coverage. Between the Olifants River and Mossel Bay there is 100% coverage. For the remainder of the Cape Province to the Kei River, the coverage is 82%, most of the unsurveyed coastline being cliffs between Kynsna and the eastern limit of the Tsitsikamma Coastal National Park at Oubosstrand. Approximately 50% of Transkei is covered; however these counts are in October and are therefore not summer counts. The Natal coast has been completely covered.

The databank is updated approximately twice yearly when new counts (or repeat counts of previously counted localities) are made. The currently available versions are Underhill and Cooper (1983 a,b,c,d), and run to some 800 pages of computer printout.

#### AVAILABILITY OF THE DATA AND COMPUTER PROGRAMS

Access to the databank is unrestricted to all bodies requiring quantitative information on coastal birds for conservation purposes. Photocopies of counts at individual localities will be supplied at cost. A nominal charge will be levied for copies of the entire databank.

Various overall statistical analyses of the data set are in progress - analyses in this category should be undertaken in consultation with the author.

The programs that produce the databank can be made available to other research workers needing to handle census data on a computer. The programs are written in UNIVAC ASCII FORTRAN. Howe-

ver, it should be relatively straightforward to tailor them to suit other computers and varying user requirements. Queries should be addressed to the author.

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