



## Avian Demography Unit

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The Avian Demography Unit is conducting the Coordinated Waterbird Counts in partnership with BirdLife South Africa.



The Tony and Lisette Lewis  
Foundation South Africa

# COORDINATED WATERBIRD COUNTS (CWAC)

## Newsletter 18

July 2001

### CWAC – ten years old!

This newsletter signals an exciting point in CWAC history, with the project celebrating its 10th anniversary this year! That's right, 10 years and 10 summer counts have passed since the first counts took place in January 1992. The project has come a long way since its beginnings and has grown to become an integral part of the ADU. The ADU also celebrates its 10th anniversary later in the year, which is significant as CWAC became the unit's first major post-atlas monitoring project, soon after its establishment in December 1991. There is much to look back on over the past 10 years and, to commemorate this achievement, I plan to provide a history of the project in the next newsletter. By then, the winter count will have been completed, rounding off the anniversary with the 10th winter count and the 20th count overall!

### Summer 2001 count

This momentous 10th summer count has lived up to expectations, setting a new record total of 376 695 birds. There is also a new record for the number of sites counted in a single season: 278, beating last winter's record of 262. A big **THANK YOU** to all compilers who diligently submitted their forms. There are a few counts outstanding and we ask those compilers who still have not submitted their summer forms to please do so as soon as possible.

To what can we attribute this high summer count? A couple of factors have been identified: (1) high counts at some of the larger wetlands (e.g. Langebaan Lagoon, Barberspan, Strandfontein Sewage Works, Lower Berg River, Spitskop Dam), (2) a higher return of counts submitted for sites that are regularly counted and (3) registration of a large number of new sites, some with relatively good counts. This is encouraging and it would be great to see these levels maintained or improved in the future. In this regard, it is important to remember, however, that results are much more meaningful when counts are done regularly over an extended period. This is in preference to once-off counts at new sites which, although they add relevant data, need the dimension of time to become really interesting.

We nevertheless welcome once-off counts, as these sites can often reveal as yet unknown waterbird hotspots. Maintaining coverage at new sites can pose difficulties (lack of observers, limited resources e.g. fuel etc.), but this is where the CWAC network plays a vital role. Existing compilers and observers can assist in finding enthusiastic observers to cover new sites. This promotes CWAC and allows a wider spectrum of people to get involved with waterbird and wetland conservation in South Africa.

### New sites

A total of 20 new sites was registered after this count, including **six each from the Northern Province** (Doornbult Farm Dam, Kalkfontein Irrigation Dams, Rondepan Farm Dams, Sterkloop Wetlands, Turfloop Dam and Rooibosrant Dam (KNP)), **and the Western Cape** (George Sewage Works, Hartebeeskuil Dam, Kleinriviersvlei, Lourens River Estuary, Noordhoek Dam and Zandvlei: Lower Estuary), **four from the Free State** (Bloemspruit Sewage Works, Ella Farm Dam, Samenwerking Farm Dam and

Skop Pan), **two from the Eastern Cape** (Umtata Dam and Van Ryneveld's Pass Dam) **and one each from KwaZulu Natal** (Two Pans) **and the Northern Cape** (Klipkolk Farm Dam). Thanks to all the compilers who have registered these new sites. Keep up the good work!

It is great to see six new sites from the Northern Province, as this is a region where coverage is generally poor. Five of these are in the Greater Pietersburg district and thanks go to Joe Grosel, the Regional Organiser for this region, for identifying and coordinating the counts at these wetlands. Members of the Pietersburg Bird Club enthusiastically assist Joe with these counts. The remaining site (Rooibosrant Dam) is the first site to be registered from the Kruger National Park. John Swards and members of the Phalaborwa Bird Club are coordinating this count, and they plan to include more dams from the northern half of the Kruger in the future.

Another region where coverage is expanding is the Eastern Cape. Most of the region's existing sites are coastal wetlands and the two new sites add much needed inland wetlands to the region's CWAC list. It is also encouraging to see seven new farm dams. As mentioned in previous newsletters, CWAC lacks adequate data for this type of wetland and if additional sites from other regions can be counted, CWAC will hopefully be able to shed some light on how waterbirds use wetlands in agricultural landscapes.

### Breeding data

It is gratifying to see that large numbers of observers are completing this section on the census form; this is providing valuable information. For those observers who have not yet collected breeding data, we encourage you to be aware of breeding activity during counts and to make a note of as many active nests (i.e. with eggs or chicks) as possible. The information should be recorded in the **Additional Breeding Information box** on the census form. Please refer to Information sheet No. 9 (*Guidelines for the completion of the census form*) for further details about collecting breeding information for CWAC.

### Highlights

Rather than list all relevant species, I have selected 14 species and provided some details on their abundance and distribution.



**Storks:** **Black Stork** is not regularly recorded, but six birds from Vanderkloof Dam–Seekoerivier tributary, four birds from Bellair Dam and one bird at Beaufort West Bird Sanctuary. Interestingly, two **Marabou Storks** were seen at Spitskop Dam and are probably from the north or north-east, wandering in search of food concentrations during the non-breeding season.



**Hérons & egrets:** The **Squacco Heron** is a relatively inconspicuous species. Its cryptic colouration and secretive habits probably account for it being an uncommon waterbird. It is generally under-recorded for CWAC but this summer counts were received from Spitskop Dam (121), Marievale Bird Sanctuary (84), Barberspan (56), Thulazihleka Pan (30), Neshe Pan (29), Vaalharts Weir (28), Tshanetshe Pan (21), Blood River Vlei (16), Grootvaly on Blesbok (14), Malandeni Sewage Works

(13), Rooiwal Sewage Works (10) and Anglo Reserve (10).

Another small, uncommon heron, the **Greenbacked Heron** is usually crepuscular or nocturnal in its habits and could therefore be missed during counts. One would therefore expect low reporting rates for such a species, but good counts were reported from Northern Treatment Works (12), Loskop Dam (12), Masibekela Wetlands (8), Pietersburg Bird Sanctuary (8), Pongolapoort Dam (7), Kosi Bake Lake System (6), Swadini Dam (3), Nyamithi Pan (3) and PMC Wetlands (3). One of the more interesting records came from Kwena Dam in Mpumalanga where a single **Rufousbellied Heron** was observed. This is only the sixth record for CWAC. This species has its strongholds in the Okavango and Zimbabwe (Zambezi valley) and is described as a summer vagrant to South Africa. It can be found at almost any wetland but prefers well-vegetated waters. This record was of a bird seen in the southern section, where the Crocodile River enters the dam, an area that is dominated by reeds and sedges.

**Black Egret** is a species confined generally to the highveld regions of South Africa, and although it is a conspicuous species, is not commonly recorded. Both atlas and CWAC data show that birds are more common during summer than winter. The atlas also shows the range of the egret expanding westwards, and counts this summer from Spitskop Dam (50) and Barberspan (16) support this. There are historical CWAC records from three Western Cape localities suggesting that birds may move long distances, winter records also hinting at post-breeding dispersal. The Blesbokspruit is probably the most popular highveld refuge for this species as is evidenced by counts from Marievale Bird Sanctuary (20) and Anglo Reserve (11). They seem to be able to adapt to suburban wetlands – ten birds were counted at Korsman Bird Sanctuary, located in Benoni on the East Rand.

**Ducks & geese:** The **South African Shelduck** is a southern African endemic which is largely confined to the Karoo. It was unknown in KwaZulu-Natal in the early part of the 20th century, but has since expanded its range eastwards into this province. Numerous counts from this summer have come from KwaZulu-Natal localities and suggest that this species is becoming more widespread and common in the province – Waterford Farm Dams (16), Northern Treatment Works (3), Blood River Vlei (2), Malandeni Sewage Works (2), Harding Dam (1).

Another species that is not common in KwaZulu-Natal is **Fulvous Duck**, the atlas showing the coastal pans in Maputoland to be the only region where it is regular. This makes the count of 63 birds from Hlatikulu Valley, in the KwaZulu-Natal midlands, an interesting record. This count was the only summer record of Fulvous Duck from any KwaZulu-Natal CWAC site.

**Knobbilled Duck** is sparsely distributed on the highveld of Gauteng and Mpumalanga, being described as a straggler or vagrant to these areas. A count of 95 birds from a seasonal pan in Mpumalanga (Blinkpan Oranje) may therefore suggest a response to good local rains that fell during this past summer. Rooibosrant Dam, the first CWAC site in the Kruger National Park, recorded 31 birds in mid-January, and although generally common and widespread in this region, it would have been interesting to note if the birds were breeding. Interestingly, three of the five new sites in the Northern Province recorded small numbers (2–3 birds) of Knobbilled Duck, adding new site localities to the CWAC database for this species.

Similarly **Maccoa Duck** is generally uncommon across its range, but may be locally common in the southwestern Cape in wet years. They occur in pairs or small groups usually on deep, nutrient-rich inland waters with emergent vegetation. This summer, good counts were reported from Strandfontein Sewage Works (89), Bosmanslaagte Pan (36), Rustig North Pan (30), Blinkpan Oranje (21) and Oranje Pan (21).

**Rails & crakes:** The **Spotted Crake** is a Palearctic migrant to South Africa, preferring dense wetland vegetation. It was

recorded in only four grid cells during the atlas and was probably under-recorded owing to its secretive habits. This makes the first CWAC record, an individual counted at Rietspruit this summer, that much more significant.

**Terns:** Fifty **Damara Terns** were seen at the Orange River Estuary, two birds at De Mond Estuary and one bird at Botrivierlei. Recently, a bird ringed at the Orange River Estuary was recovered in Benin, West Africa and provided the first real evidence of migration between these two areas. Previously, migration was suspected based on counts of birds at these two sites, and shows the value of both count data and ringing in migration studies.

Three **Arctic Terns** were recorded from Botrivierlei and are probably birds at the start of their return northward migration back to their breeding grounds in the arctic.

A reminder to keep a lookout for colour-flagged **Caspian Terns**. To gauge their movements, 35 birds were ringed at De Mond Nature Reserve (Cape south coast) in November and December 2000. Birds are marked with blue and yellow flags on both legs. If you do see any of these birds, please record the date, locality, and on which legs the coloured flags were seen, and send this info to the ADU as soon as possible.

## Vagrants and Out-of-Range Records

*(Observers are reminded that national rarity forms need to be completed for species listed in this section and submitted for verification to the National Rarities Committee; forms and contact details can be obtained from the ADU.)*

**European Oystercatcher:** Gamtoos River–False Mouth (1); **Sand Plover:** Richards Bay Wetlands (42), Langebaan Lagoon (13); **Blacktailed Godwit:** Barberspan (3) and Marievale Bird Sanctuary (2); **Broadbilled Sandpiper:** Richards Bay Wetlands (2); **Buff-breasted Sandpiper:** Marievale Bird Sanctuary (1); **Green Sandpiper:** Rietvlei & Marais Dams (1); **Redshank:** Great Fish River Estuary (1); **Crab Plover:** Richards Bay Wetlands (1); **European Marsh Harrier:** Breyten Pan (1) and Marievale Bird Sanctuary (1); **Lesser Blackbacked Gull:** Spitskop Dam (1) and PMC Wetlands (1); **Blackheaded Gull:** Barberspan (1) and Strandfontein Sewage Works (1); **Franklin's Gull:** Strandfontein Sewage Works (1) and **Pectoral Sandpiper:** Knysna Lagoon (1).

## Adding new counting areas to existing sites

Lately, we have had two sites 'expanding' the area counted within or adjacent to the original site. As this may occur again, we would like compilers to adhere to the following protocol when adding new counting areas to an existing site: **the 'new' areas need to be registered, and therefore counted, as separate sites.** If these 'new' areas are included together with the original site, we cannot make meaningful comparisons between seasons for future counts as we will not be comparing apples with apples any longer, i.e. the area counted before will not be the same after inclusion of the 'new' areas.

However, data from all areas can be combined to get an overall picture of waterbird abundance and diversity for the entire site and these could then be compared from that point onwards. As for any site, please remember to keep counts consistent and regular for these 'new' areas. You are welcome to contact me should you have any queries or questions concerning this.

## February roadshow

Earlier in the year (12–16 February), Donella Young (CAR Project Coordinator) and I undertook a trip to parts of the Eastern and Western Cape. The main focus of the trip was to attend BirdLife Eastern Cape's AGM where we were the guest speakers, but we used the trip as an opportunity to promote the projects and provide feedback to other participants and clubs *en route*. In total we managed six presentations in six days, making stops at Mossel Bay, Sedgefield, Plettenberg Bay, Port Elizabeth, Kenton-on-Sea, Grahamstown, Graaff Reinet, Uniondale and Oudtshoorn.

The trip was a tremendous success, with one of the highlights being the meeting in Graaf-Reinet. Attended by about 60 enthusiastic people, including many local farmers, the meeting ended with

about 15 people expressing interest in establishing a bird club for the area. The Graaff Reinet Bird Club is now a reality and this will provide a much-needed nucleus for CWAC and CAR in the central parts of the Eastern Cape. A few potential CWAC sites were also identified on the trip, including Darlington Dam, Beervlei Dam and Van Ryneveld's Pass Dam. The latter has already become a registered CWAC site (see above). Efforts are currently being made through the Diaz Cross and Beaufort West Bird Clubs, respectively, to organise counts at the other two sites.

### Webpage developments

The CWAC Webpage has undergone some changes in the past 4–5 months. Many of you (via my CWACNET message) will have seen the Bot River Estuary prototype of a site page which we have developed. This is what we would like to do for each of our regularly counted sites as this will help to promote the project, and acknowledge the contributions made by you, the compilers and observers. Although it will take time to develop complete and up-to-date pages for each site, we intend to add a couple of sites every few of months.

What we do require for each page are pictures for each site. Many compilers have submitted Fixed Point Photographs (FPPs) for their sites and these are being catalogued for use with the CWAC database, and for webpage use. For those of you who have not submitted FPPs, now is a good opportunity to get your camera's clicking and make a contribution to your webpage. FPPs should be taken from the same point, facing in the same direction, at the same time of year, once every two years, and should show the major habitat types at the site. For more detailed information about how to take FPPs see Circular No. 6 or contact me. For those with access please visit the CWAC webpage, browse around, and if you have any comments or suggestions please let us know. The URL is [http://www.uct.ac.za/depts/stats/adu/p\\_cwac.htm](http://www.uct.ac.za/depts/stats/adu/p_cwac.htm).

Many people have been enquiring about electronic submission of census forms. Ideally what we would like to have is an on-line census form which compilers (with access) can complete and submit via the webpage. This will certainly do away with posting forms and will streamline data submission and data capture. This is being developed, but with limited resources and staff shortages, this will take some time to implement. In the interim, and to accommodate e-users, we plan to make the census form available to download from the webpage, which can then be stored on your hard drive and used as a template on which to enter your results. Once complete, the forms can then be e-mailed to me as an attachment. This will streamline the submission process and leave a backup on your hard drive – of course, all compilers should be keeping backup copies of all their counts regardless of the system used. Alternatively, you can also print the census form and still send it to us in the post, but it will allow compilers to have access to the census form at any time. I will inform all compilers via CWACNET when this is completed.

Lastly, a list of all CWAC sites with their respective site codes will shortly be available from the webpage. In addition, newsletters will also be available soon after they have been published and in future e-users are encouraged to read or print the newsletters via the webpage.

### CWAC personality profiles

Continuing with what I hope is an interesting aspect of the newsletter, this issue profiles one of CWAC's longest participating compilers: **Stan Madden**. Stan, who lives with his wife in Dunnotar, Springs, has been involved with environmental conservation in Gauteng for nearly 50 years, his interest in wetlands and waterbirds going back as far as 1948 (see below).

His main focus, for the last 30 years, has been the Blesbokspruit, one of South Africa's earliest (1986) designated RAMSAR sites. Together with numerous volunteers, he diligently counts several major waterbird sites, including the famous Marievale Bird Sanctuary, within this important wetland system for CWAC. He is also honoured with having a bird sanctuary named after him, the Stan Madden Bird Sanctuary, which is also a CWAC site. He is currently a founder trustee of the Grootvaly Wetland Reserve, a reserve situated in the northern half of the Blesbokspruit with a fully equipped Environmental Education (EE) centre and full time EE Officer.

**ADU:** How did you become aware of CWAC?

**Stan:** In December 1991, I received a letter from Professor Les Underhill inviting me to contribute a summer and winter count during 1992 of birds in the Blesbokspruit Ramsar Site and other 'shadow' wetlands which I was involved in. These counts were the beginning of the annual counts which later became known as CWAC.

**ADU:** How long have you been 'CWACing'?

**Stan:** Since the start of CWAC in summer 1992, but my interest in counting birds, mainly waterfowl, started in 1948 when my fascination with the Blesbokspruit began. I did have an interest in birds before this but it became more serious after 1948. My record keeping in those days was a little haphazard and today I often wish I had been more meticulous.

**ADU:** How many sites do you count at present and who assists you with the counts?

**Stan:** I count five sites within the Blesbokspruit system with assistance mainly from members of the Springs/Nigel branch of the Wildlife and Environment Society of SA and members of the East Rand and Wits Bird Clubs.

**ADU:** Why do you do it and what keeps you going?

**Stan:** Counting birds in a certain area on a regular base such as is done at CWAC sites is a vital necessity for the long term conservation and management of these areas. I was able to prove in 1996 by using my records from bird counts, that the pollution of the Blesbokspruit had seriously affected the bird life in the area and so put pressure on the industry concerned. These records are now also helping in the environmental management of certain areas of the Blesbokspruit and that is a big reason to keep doing these counts.

**ADU:** What have been some of your highlights?

**Stan:** On an afternoon in early July 1999, I was out counting birds at a site on the Blesbokspruit which turned into a highlight and an unforgettable sight for me. Within minutes of my arrival there seemed to be waterfowl everywhere I looked, in the air, on the water and on the ground. There were well over 600 Whitefaced Duck, 500 Spurwinged Geese, hundreds of Fulvous Duck, Yellowbilled Duck, Redbilled Teal plus many other species. I have been involved in counting birds for various projects for many years but suddenly that afternoon I felt completely inadequate for the task! I stopped counting and just soaked up the occasion. When I visited the area the following afternoon, it was comparatively devoid of waterfowl.

**ADU:** Why would you recommend CWAC to other birders?

**Stan:** 'CWACing' adds another dimension to bird watching. As this project proceeds, more and more uses will be found for these CWAC records and information. I think it is very important for 'birders' to involve themselves in projects of this nature. The satisfaction of knowing that one's time bird-counting can add to the long term conservation and management of a wetland is surely better than just a morning's birdwatching for no other purpose than the hope of another species on your life list.

### Summary printouts

Included with the newsletter are summary printouts for your sites for summer 2001. Please check that **ALL** details are correct and return the form to me as soon as possible. You can also send the form via fax, or confirm any corrections via e-mail. This information is important as it ensures that the CWAC database is accurate and up-to-date.

### Winter 2001 count

Census forms for the upcoming winter count are enclosed. Please remember that this count takes place during the month of July with the preferred dates being the second weekend in July (**Saturday 14th or Sunday 15th**), or as close to these days as possible.

Happy CWACing.

*Doug Harebottle  
Project Coordinator*



## Summer 2001 CWAC counts

Entries in *italics* indicate new sites for CWAC.

The official site codes (centre point coordinates) are included for your quick reference.

<b>Mpumalanga</b>	<b>Site code</b>	<b>Compiler</b>	<b>Count</b>
Arnot Pan	25462946	Woden Odendaal	865
Arnot Vlei	25462947	Woden Odendaal	98
Blaauwwater Pan	26173016	Woden Odendaal	149
Blinkpan (Arnot)	25542953	Woden Odendaal	78
Blinkpan (Lothair)	26203020	Woden Odendaal	254
Blinkpan Oranje	26032931	Woden Odendaal	2258
Bosmansfontein Pan	26062941	Ken Hattingh	953
Bosmanskrans Spruit	25592920	Woden Odendaal	252
Bosmanslaagte Pan	26072942	Ken Hattingh	1030
Bosmanspoort Dam	26052941	Ken Hattingh	150
Breyten Pan	26183000	Woden Odendaal	1056
Coetzerspruit	25552936	Ken Hattingh	187
Coetzerspruit (source of)	26032934	Woden Odendaal	1326
Goedehoop Pan 3	26193017	Woden Odendaal	138
Goedehoop Pans 1 & 2	26203018	Woden Odendaal	256
Goedenhoop Pan	25552928	Ken Hattingh	1438
Groot Riet Pan	25572937	Ken Hattingh	40
Grootpan	25552954	Woden Odendaal	689
Hendrina Municipal Dam	26092944	Ken Hattingh	145
Kanhym Pan 1	25502931	Ken Hattingh	2298
Kanhym Pan 2	25512941	Ken Hattingh	621
Kanhym Pan 3	25522932	Ken Hattingh	786
Kanhym Pan 4	25512933	Ken Hattingh	230
Klein Riet Pan	25562940	Ken Hattingh	342
Kwena Dam	25213022	Lientjie Cohen	273
Lake Banagher (East)	26203022	Woden Odendaal	128
Lake Banagher (Proper)	26213022	Woden Odendaal	771
Lake Banagher (West)	26203021	Woden Odendaal	340
Lake Chrissie 92 IT	26193013	Woden Odendaal	210
Lakenvlei (East)	25353006	David Gaynor	194
Lakenvlei (West)	25373002	Woden Odendaal	27
Leeuwpans	26352857	Piet van der	2906
Lemoenfontein Dam 1	25482940	Ken Hattingh	1058
Lemoenfontein Dam 2	25472939	Ken Hattingh	163
Lemoenfontein Dam 3	25472941	Ken Hattingh	305
Lemoenfontein Pan	25472938	Woden Odendaal	479
Loskop Dam	25262919	Lientjie Cohen	858
Lydenburg Fisheries	25073028	Lientjie Cohen	162
Masibekela Wetlands	25533150	Lientjie Cohen	533
Mavella Pan	25542924	Woden Odendaal	419
Middelburg Dam	25482933	Kassie Kasselmann	292
Mooiplaats Pan	26173007	Woden Odendaal	23
Nooitgedacht Pan	25442947	Woden Odendaal	528
Ogies Pans	26052904	Andy McLetchie	190
Oranje Pan	26012932	Woden Odendaal	187
Oranjevallei Pan	26122945	Ken Hattingh	401
Otter Pan	25552956	Woden Odendaal	678
Rustig Dam	25462936	Woden Odendaal	115
Rustig North Pan	25442936	Woden Odendaal	761
Rustig Pan	25452936	Woden Odendaal	769
Simonsdal Pan	26173009	Woden Odendaal	118
Swadini Dam	24333048	James Coetzee	70
TNC Proposed Bird Sanctuary	26082922	Ken Hattingh	436
Witbank Dam	25532918	Woden Odendaal	1158
<b>TOTAL</b>			<b>30191</b>

<b>Gauteng</b>	<b>Site code</b>	<b>Compiler</b>	<b>Count</b>
Anglo Reserve	26182830	Stan Madden	654
Bonaero Park Pan	26072816	Albert Froneman	946
Bronkhorstspruit Dam	25542842	Pauline Leinberger	584
Cowles Dam (Springs Bird Sanctuary)	26132828	Stan Madden	164
Diepsloot Nature Reserve	25572800	Henk Alting	1287
Elandsvei 414	25592827	Boudewyn van der Lecq	1194
Grootvaly on Blesbok	26162830	Stan Madden	649
Grootvaly Wetland Reserve	26142829	Stan Madden	563
Korsman Bird Sanctuary	26112818	Andy McLetchie	1089
Leeupan	26142819	Bruce Glenday	*
Marievale Bird Sanctuary	26212830	Stan Madden	3077
Rietspruit (Rooikraal)	26202817	Andy McLetchie	335
RietMei & Marais Dams	25532817	Rihann Geysler	693
Rolfe's Pan	26102813	Koos van Dyk	278
Roodeplaat Dam	25382821	Pauline Leinberger	343
Rooiwal Sewage Works	25342814	Andre van der Walt	1494
Sanctuary	26242828	Stan Madden	594
<b>TOTAL</b>			<b>13 944</b>
<i>* outstanding</i>			

<b>North West</b>	<b>Site code</b>	<b>Compiler</b>	<b>Count</b>
Barberspan	26352535	Andre Vosloo	17 394
Leeupan	26322536	Andre Vosloo	1193
Vaalkop Dam	25202728	Koos van Dyk	1719
<b>TOTAL</b>			<b>20 306</b>

<b>Northern Province</b>	<b>Site code</b>	<b>Compiler</b>	<b>Count</b>
<i>Doornbult Farm Dam</i>	23472927	Joe Grosel	342
Doorndraai Dam	24152845	K. Steenkamp	261
<i>Kalkfontein Irrigation Dams</i>	23372923	Joe Grosel	583
Naboomspruit Sewage Works	28432431	Saartjie Kidson	476
Namakgale Sewage Works	23573102	John Swards	488
Nylsvlei Nature Reserve	24392841	Boudewyn van der Lecq	147
Olifants River (Olifants River North Shareblock)	24103100	John Burchmore	*
Pietersburg Bird Sanctuary	23512927	Conrad van Tonder	189
PMC wetlands	24013110	John Swards	427
<i>Rondepan Farm Dams</i>	23472924	Joe Grosel	246
<i>Rooibosrant Dam</i>	23153110	John Swards	419
<i>Sterkloop Wetlands</i>	24362924	Joe Grosel	836
<i>Turfloop Dam</i>	23532946	Joe Grosel	1384
Visser's Dam	24402839	Koos van Dyk	47
<b>TOTAL</b>			<b>5845</b>
<i>* outstanding</i>			

KwaZulu-Natal	Site code	Compiler	Count
Albert Falls Dam	29263024	Shirley Bennett	246
Banzi Pan (Ndumo)	26523217	Robert Kyle	46
Blood River Vlei	27503035	Duncan Mckenzie	2301
Dieu Donne Farm Dam	29292941	Pete Chadwick	205
Durban Bayhead	29533101	Roy Cowgill	541
Harding Dam	30342952	John Howe	249
Hlatikulu Valley	29152941	Brent Coverdale	332
Klipfontein Bird Sanctuary	27483048	Duncan Mckenzie	264
Kosi Bay Lake System	26583250	Robert Kyle	2416
Lake Eteza	28213209	Caroline Fox	33
Lake Mfutululu	28253215	Caroline Fox	10
Lake St Lucia	28043227	Caroline Fox	4224
Malandeni Sewage Works	28342948	Ken Gordon	2027
Mavuya Pan	28303212	Caroline Fox	106
Mbozambo Waste Water Lagoon	29173117	Iain Kerr	723
Mfazana Pans	28153228	Caroline Fox	56
Mfula Pan	27373233	Craig Mulqueeny	0
Mhlazi Pan	27363259	Craig Mulqueeny	21
Midmar Dam (Reserve only)	29313011	Shirley Bennett	45
Ndlebeni Pan	27423237	Craig Mulqueeny	80
Neshe Pan	27393224	Craig Mulqueeny	296
Nhlonhlela Pan	27363212	Craig Mulqueeny	31
Northern Treatment Works	29483100	Richard Boon	1227
Nsumu Pan	27403219	Craig Mulqueeny	541
Nyamithi Pan (Ndumo)	26533218	Robert Kyle	88
Pongolapoort Dam	27253158	Craig Mulqueeny	1213
Reichenau Mission Dam	29482938	Brian Murray	354
Richards Bay Wetlands	28493202	Pete Outhwaite	7836
Scaffel Farm Dam	29422926	John Crowson	10
Shokwe Pan (Ndumo)	26533213	Robert Kyle	55
Sodwana Bay to Cape Vidal	27523236	Caroline Fox	466
St Lucia Sewage Works	28233225	Caroline Fox	60
Thulazihleka Pan	28473203	Pete Outhwaite	599
Tshanetshe Pan	27403226	Craig Mulqueeny	157
Two Pans	28263217	Caroline Fox	17
Umgeni River Estuary	29493102	Steve Davis	1423
Umvoti River Estuary	29233121	Shirley Jex	207
Waterford Farm Dams	29512919	John Crowson	687
Watermead Dam	29502935	Brian Murray	328
Yengweni Pan	27393226	Craig Mulqueeny	35
<b>TOTAL</b>			<b>29 555</b>

Eastern Cape	Site code	Compiler	Count
Bar None Saltpan	33502533	Paul Martin	368
Bushmans River: Mouth-Ghio Bridge	33402635	Maureen Turner	592
Cape Recife Reclamation Works	34012541	Paul Martin	256
Chatty Saltpans	33512535	Paul Martin	2541
Gamtoos River (False Mouth)	33582505	Chuck Cook	1224
Gamtoos River: Mouth-6km upstream	33582502	Chuck Cook	2403
Ghio Pans	33382634	Tony Tree	339
Great Fish River Estuary	33292707	Tony Tree	535
Kabeljous River Estuary	34002456	Chuck Cook	1909
Kowie River Estuary	33352653	Tony Tree	387
Krom River Mouth	34082450	Chuck Cook	2050
Mondplaas Ponds	33572458	Chuck Cook	554
PE Power Station Pans	33522536	Paul Martin	994
Perseverance Vleis	33502532	Paul Martin	216
Queenstown Sewage Works	31552650	Kate Webster	322
Redhouse Saltpan	33522533	Paul Martin	2796
Riet River Bay (Three Sisters-Riet)	33332701	Tony Tree	478
Seekoei River Estuary	34052454	Chuck Cook	1948
Umtata Dam	31302842	Sonja Vorster	921
Van Ryneveld's Pass Dam	32132432	Joan Collett	993
Zwartkops River Estuary	33522538	Paul Martin	4600
<b>TOTAL</b>			<b>26 426</b>

Western Cape	Site code	Compiler	Count
Berg 1: Mouth & Estuary	32471809	Doug Harebottle	4217
Berg 2: Cerebos Saltpans	32481810	Michael Byrnes	1189
Berg 3: Hotel Mudflats & Estuary	32471811	Keith Harrison	1028
Berg 4: Hotel Saltpans	32481811	Mel Tripp	2704
Berg 5: De Plaats	32481812	Phil Whittington	6775
Berg 6: Kliphoek Saltpans	32501812	Rob Satchel	934
Berg 7: Kliphoek River &	32491813	Rob Satchel	142
Berg 8: Kruispad Floodplain	32521815	Sylvia Ledgard	438
Berg 10: Kersefontein Floodplain	32531819	Warwick Board	112
Berg 11: Doornfontein Floodplain	32521819	Elsje van der Linde	102
Berg 12: Melkplaas Floodplain	32511814	Elsje van der Linde	661
Berg 13: Springersbaai	32481813	Elsje van der Linde	115
<i>Subtotal: Lower Berg River</i>			<i>18 417</i>
Beaufort West Bird Sanctuary	32222237	Japie Claassen	773
Bellair Dam	33422035	Andrew Schofield	2347
Bitou River	34012323	Brian Denman	373
BotrivierVlei	34211906	Mariana Delpont	2604
De Hoop Vlei	34262023	Paul Bothma	6256
De Mond Estuary	34432007	Pieter Albertyn	4380
Dick Dent Bird Sanctuary	34061849	Gavin Lamont	182
Droëvlei	33381843	Mariana Delpont	2760
<i>George Sewage Works</i>	<i>33592227</i>	<i>Ian Mileham</i>	<i>241</i>
Goukamma River Mouth	34042257	Rhett Hiseman	293
Great Brak River Estuary	34042214	Ian Mileham	164
GroenVlei	34012252	Rhett Hiseman	407
<i>Hartebeeskuil Dam</i>	<i>34062200</i>	<i>Joy van Korff</i>	<i>467</i>
Jakkalsvlei	32051819	Kevin Shaw	37
Kamanassie Dam	33392225	Ian Mileham	358
Keurbooms River Estuary	34022324	Brian Denman	730
KlavenVlei	34021845	Gavin Lamont	43
Kleinmond River Estuary	34211905	Mariana Delpont	76
<i>Kleinriviersvlei</i>	<i>34251921</i>	<i>Mike Ford</i>	<i>1595</i>
Knysna Lagoon	34032302	Joy van Korff	4309
Knysna Sewage Works	34042302	Joy van Korff	361
Langebaan Lagoon	33081804	Doug Harebottle	25 023
Leeu Gamka Dam	32362201	Japie Claassen	2474
<i>Lourens River Estuary</i>	<i>34051844</i>	<i>Gordon Scholtz</i>	<i>1304</i>
Modder River Mouth	33291818	Mel Tripp	66
Mossel Bay Sewage Works	34072206	Ian Mileham	311
Nature's Valley (Groot River)	33592332	Joy van Korff	17
<i>Noordhoek Dam</i>	<i>32572158</i>	<i>Japie Claassen</i>	<i>293</i>
Noord Agter Paarl Irrigation Dam	33401858	Yvonne Weiss	356
Olifants River Mouth (South)	31421812	Kevin Shaw	1962
Oudtshoorn Sewage Works	33372214	Ian Mileham	274
Paardevlei Dam	34051849	Gavin Lamont	257
Paarl Bird Sanctuary	33411858	Yvonne Weiss	3643
Potgieter Dam	33382209	Ian Mileham	680
Raapenberg Bird Sanctuary	33561828	Doug Harebottle	255
Radyn Dam	33181845	Otto Schimidt	18
Rietvlei Wetland Reserve	33511829	Koos Retief	2832
Rocher Pan	32361818	Kevin Shaw	1377
Rondevlei Nature Reserve	34041830	Dalton Gibbs	727
Slent Farm Dam	33381849	Judy New	709
Springfontein Dam	32192238	Japie Claassen	2574
Steenbras Dam	34101854	Gavin Lamont	752
Stompdrift Dam	33312237	Ian Mileham	656
Strandfontein Sewage Works	34051831	Dick Barnes	30 145
Swartkop se Dam	33061946	Helm van Zijl	0
Theewaterskloof Dam	34021913	Gerry Jooste	3722
VerkeerdeVlei	33192052	Helm van Zijl	0
VerlorenVlei	32201825	Kevin Shaw	3845
Vermont Salt Pan	34251910	Mike Ford	11
VoëlVlei	34162149	Mick Killeen	0
Wadriif Saltpan	32131821	Kevin Shaw	268
Wellington Waste Water Works	33391858	Johan Rousseau	440
Wilderness Lakes: Swartvlei	34002245	Ian Russell	5443
Wilderness Lakes: Touw System	33592240	Ian Russell	5288
WildevoëlVlei	34081821	Eric Barnes	598
Zandvlei: Upper Estuary	34061828	Brian Herman	1006
Zandvlei: Lower Estuary	34071828	Brian Herman	1316
<b>TOTAL</b>			<b>145 815</b>

Northern Cape	Site code	Compiler	Count
Bosduiwekop Dam	30152445	Jannie Venter	842
Dampoort Dam	28112429	Mark Anderson	570
Danielskuil Dams	28112333	Mark Anderson	0
		Francois	
De Aar Sewage Works	30412402	Taljaard	84
Espagsdrift Vlei	27562444	Mark Anderson	702
Faugh A Ballagh	30522438	Jannie Venter	0
Ganspan A	27562445	Mark Anderson	143
Ganspan B	27542447	Mark Anderson	1979
Ganspan Nedersetting Dam	27592446	Mark Anderson	0
Great Pan	28182335	Mark Anderson	0
Hanskopfontein Pan	28282448	Mark Anderson	0
Holpan/Graspan Pans	28412426	Mark Anderson	0
Hopetown Sewage Works	29422405	Ronelle Visagie	95
		Francois	
Kafferspoort Dam	30552416	Taljaard	0
Kamfers Dam	28402446	Mark Anderson	9579
Klipkolk Farm Dam	26522005	Mark Anderson	905
Kriegerspoort Dam	31172433	Jannie Venter	0
Marrick Pan	28462436	Mark Anderson	0
Nantwich Saltpan	28292446	Mark Anderson	61
Nooitgedacht	29542434	Mark Anderson	1382
Nuwejaarsfontein Farm Dam	30512359	Mark Anderson	0
Orange River Estuary*	28381627	Mark Anderson	8548
Orange River:			
Hohenfels-Bridge*	28301639	Mark Anderson	484
Platfontein Pans	28392437	Mark Anderson	0
Pudu Farm Dam	27482244	Mark Anderson	0
Rooipan	28222335	Mark Anderson	0
Sakrivierspoort	31502208	Japie Claassen	1014
So Ver Myn Dam	28132431	Mark Anderson	1263
Spitskop Dam	28042433	Mark Anderson	10 791
Springbok Sewage Works	29401753	Enrico Oosthuysen	241
Strydenburg Pan	29562341	Ronelle Visagie	0
Vaalharts Weir	28072455	Mark Anderson	1641
Vanderkloof Dam	30202500	Jannie Venter	96
Volstruis Pan	28402410	Mark Anderson	0
		Francois	
Wortelfontein Dam	31082408	Taljaard	171
<b>TOTAL</b>			<b>40 591</b>

\* the ADU would also like to acknowledge the assistance of the following people during these counts: Holger Kolberg and Trygve Cooper

Free State	Site code	Compiler	Count
Allemandskraal Dam	28182712	Brian Colahan	6480
Benfontein Dam	28502450	Mark Anderson	0
Benfontein Pan	28492449	Mark Anderson	0
Bloemhof Dam	27412540	Vlam Els	5103
Bloemspruit Sewage Maturation Ponds	29072616	Herman Kleynhans	633
Deelpaan	29102545	Brian Colahan	1458
Ella Farm Dam	28482637	Louise Coetzee	336
Erfenis Dam	28342650	Brian Colahan	7647
Gariiep Dam (East)	30382550	Brian Colahan	3216
Gariiep Dam (West)	30372537	Harry Bosman	2958
Kalkfontein Dam	29322515	Brian Colahan	10 558
Knellpoort Dam	29462653	Dave Hayer	1965
Koppies Dam	27152741	J.J. Joubert	2783
Krugersdrift Dam	28522600	Brian Colahan	8163
		Nick van der Walt	0
Leeupan	29082541		0
Mooispruit Farm Dam	28502635	Louise Coetzee	192
Moutloasi Setlogelo Dam	29182651	Jeremy Jones	218
		Stephanie Gerber	471
Olive Hills Farm Dam	28492558		0
Rietpan	28402618	Brian Colahan	0
Rusfontein Dam	29182637	Brian Colahan	5462
		Schalk Burger	762
Samenwerking Farm Dam	30042639		2477
Seekoeivlei	27352935	Brian Colahan	
		Stephan du Preez	773
Skoonspruit Pan	27372636		
		Stephan vd Walt	273
Skop Pan	28462606		311
Sterkfontein Dam	28262901	F. Nieuwoudt	
		Herman Kleynhans	0
Sunnyside Pan	28392608		1783
Welbedacht Dam	29522653	Brian Colahan	
<b>TOTAL</b>			<b>64 022</b>

<b>TOTAL - SOUTH AFRICA</b>	<b>376 695</b>
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