

Hessequa Bird Atlas Newsletter 3 – January 2021

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1. Short summary

The Bird Group of the U3A Stilbaai experienced an “interesting” atlas year from 1 December 2019 to 30 November 2020. Systematic surveys were done in Hessequa during the year for the first year of the next two-year cycle of the bird species monitoring for the Southern African Bird Atlas Project 2. The surveys were, however, interrupted by the Covid-19 lockdown and 25 of the autumn surveys could not be done due to the travelling restrictions. This backlog can fortunately be rectified during 2021 which is the second year of the two-year cycle. The Bird Group is ready to do the additional 25 surveys during the autumn of 2021.

The lockdown gave the members of the Bird Group the opportunity to learn more about the birds in their gardens. Garden bird lists were compiled for Jongensfontein and Stilbaai, as well as a Covid-19 Bird Album from photos which were taken from houses and gardens during the lockdown.

The enthusiastic submission of photos for the Covid-19 Bird Album brought the realisation that the Bird Group could make contributions to the Virtual Museum project. A large amount of photos have been submitted to the Virtual Museum since June 2020. This has made a large contribution to the data base of that project.

The Bird Group still has very good relations with the landowners in Hessequa and is currently in contact with 146 owners. The landowners will again receive this newsletter as well as an updated bird list for their area.

2. Background and introduction

The U3A Stilbaai Bird Group is a group of the [U3A Stilbaai](#) and more information is available on its website.

The U3A Stilbaai Bird Group has been doing surveys for the Southern African Bird Atlas Project 2 (SABAP2) in the 75 pentads of Hessequa since November 2014. [Hessequa Bird Atlas Newsletter 1 - December 2018](#) is a long newsletter and gives the background to SABAP2, as well as detail of the atlasing in the Hessequa area done by the U3A Stilbaai Bird Group from November 2014 to end November 2018.

By the end of November 2018 the first objective of SABAP2 had already been achieved in Hessequa and that was to collect enough information to ensure reliable distribution maps of the species in the area. You are welcome to read Newsletter 1 again by clicking the link above. The atlasing done up to that stage is also documented more formally in an article published in “Biodiversity Observations”. It is available at [2018: Systematic atlasing in Hessequa - From mapping to monitoring](#).

The second objective of SABAP2 is the monitoring of the fluctuations and movement of species over time. Newsletter 1 explains how the Bird Group also attended to this objective from the outset. It was initially done by ensuring that each pentad is surveyed at least once a year and in later stages twice a year. This effort was further refined and since November 2017 the monitoring is done in two-year cycles with each pentad being surveyed at least once in every season in the two-year cycle.

The results of the first of these two-year cycles (1 December 2017 tot 30 November 2019) are described in [Hessequa Bird Atlas Newsletter 2 - January 2020](#) and were also published in an article in “Biodiversity Observations” which can be read at [2020: Systematic atlasing in Hessequa - First cycle of seasonal monitoring](#).

All of the above is also summarised in a YouTube video of a presentation made by Johan van Rooyen to the “Biodiversity Development Institute”. It can be downloaded from [Atlasing in Hessequa - Johan van Rooyen](#).

This Newsletter 3 gives an account of the year from 1 December 2019 tot 30 November 2020 which is also the first year of the next two-year cycle. It describes the coverage that was achieved, as well as the challenges caused by the Covid-19 lockdown. However, the lockdown had some positive effects as it nudged the Bird Group to get involved in some other citizen science projects and this is also covered in this newsletter.

3. Progress with atlasing in Hessequa for the year from 1 December 2019 tot 30 November 2020

3.1. Progress with cumulative number of full protocol cards

As was mentioned in the background above, the Bird Group atlas 75 accessible pentads in the municipal area of Hessequa. The map in Figure 1 shows the area that is covered.



Figure 1: Map of the Hessequa atlas area

During the atlas year 233 full protocol cards were submitted to SABAP2, 159 by the Bird Group and 74 by visitors to the area. This increased the cumulative number of full protocol cards from the start of the project in 2007 during the year from 1 758 to 1 991. The increase in cards is shown in the next two figures. Figure 2 shows the cumulative totals for each pentad to 30 November 2019 and Figure 3 the totals to 30 November 2020. The figures were simplified from previous newsletters to show only the most important information. The number of the pentad can be determined by first reading the latitude on the y-axis and then the longitude on the x-axis. The number of the pentad in the top left hand corner is thus 3355_2045.

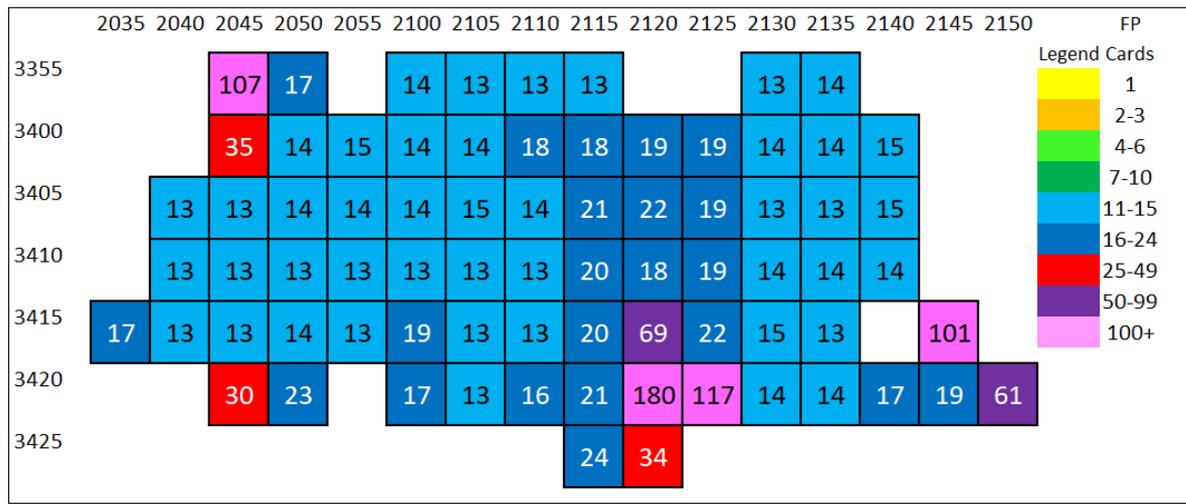


Figure 2: Cumulative full protocol cards per pentad to 30 November 2019

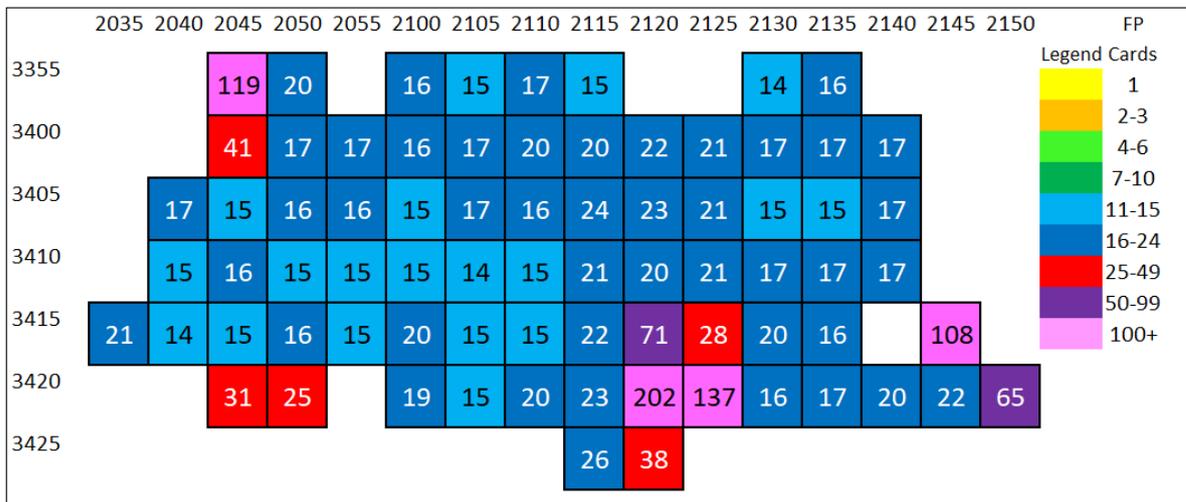


Figure 3: Cumulative full protocol cards per pentad to 30 November 2020

The impact of the 233 full protocol cards can be seen by comparing individual pentads in Figure 2 with Figure 3, but it is easily seen that a number of pentads have changed from light to dark blue. That means they now falls in the category of 16-24 full protocol cards.

3.2. Seasonal monitoring

The monitoring objective for the year was to atlas each pentad at least twice. To ensure a good distribution the surveys are done in a chess board pattern as shown in Figure 4. For the year that ended on 30 November 2020 the aim was to atlas the yellow pentads in the summer and winter, and the white pentads in autumn and spring. The only exceptions were the two blue home pentads of Stilbaai West and East (3420_2120 and 3420_2125) for which a survey was planned for each month of the year.

The seasons are still as follows:

- Summer – December, January and February
- Autumn – March, April and May
- Winter – June, July and August
- Spring – September, October and November

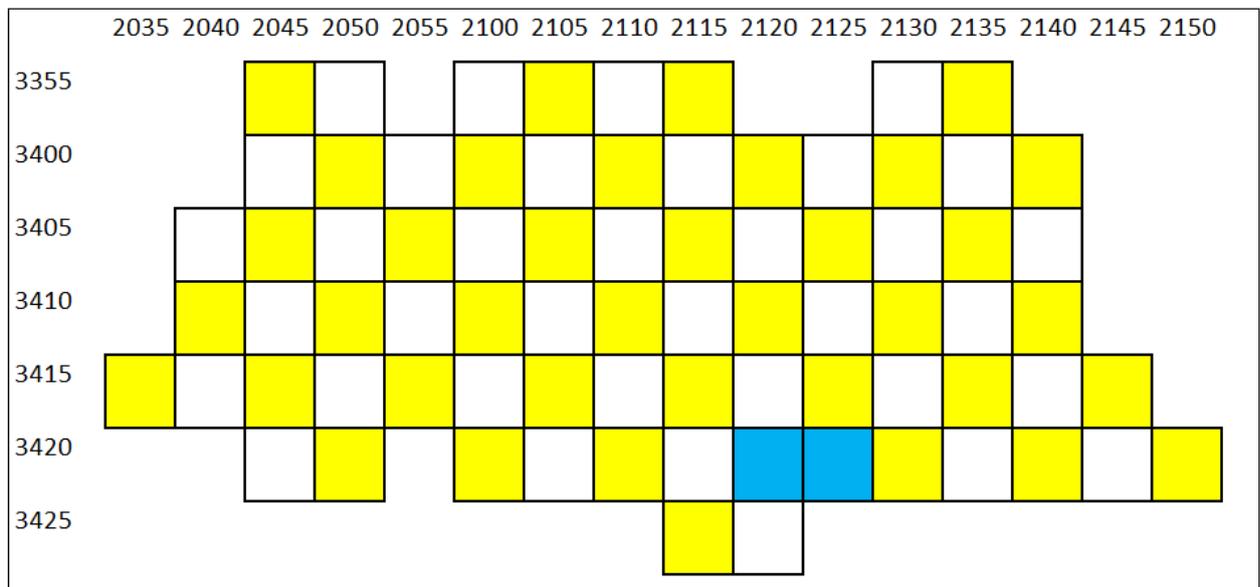


Figure 4: Distribution objective. Yellow pentads in summer and winter, white pentads in autumn and spring, blue pentads once a month

To achieve this objective 170 full protocol cards were required. The 233 cards that were submitted are theoretically more than enough to achieve the chess board pattern. However, the Covid-19 lockdown meant that the last half of the autumn season was suddenly not available and 25 surveys fell by the wayside.

The lockdown also covered the first half of the winter season, but the Bird Group's pent-up energy could be utilised to achieve the objectives for the winter in half of the time.

Figure 5 shows the distribution of the completed full protocol cards for the seasons. Each pentad is divided in 4 cells with summer at the top, followed by autumn, winter and spring in the lowest cell.

The grey cells show the pentads for which the autumn objectives were not achieved due to the lockdown.

The alternating pattern of the surveys over the seasons could be seen clearly in the column of pentads under the heading 2100. The top pentad had surveys done in the autumn and spring, and the next pentad lower down in summer and winter, then autumn (not done) and spring etc. The pentad to the right of the top one was also surveyed in summer and winter. This basic pattern was followed for the whole area.

The effect of the 233 full protocol cards which is much more than the 145 that was required as a minimum (170 minus the 25 that were not done due to Covid lockdown), is shown in Figure 5. The extra cards show up in higher colours than yellow (1 card), as well as in seasons that were not part of the objective. These extra surveys were mainly done by visitors to the area and who where not (or could not) be coordinated by the Bird Group. More cards are, however, always better for the project.

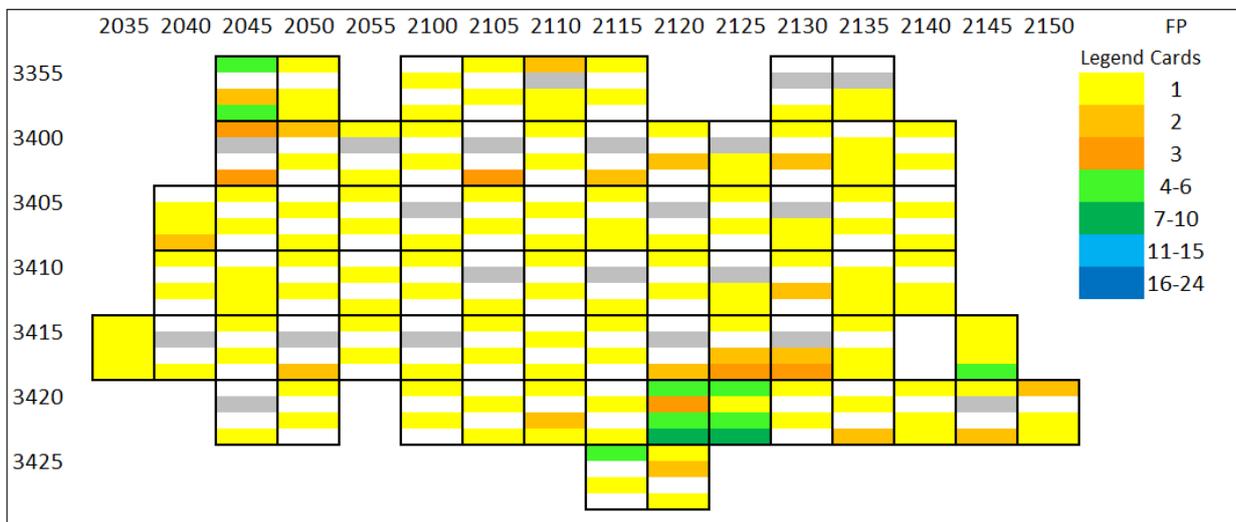


Figure 5: Distribution of the full protocol cards over the seasons

The good luck with the Covid bad luck is that this year was the first year of the next two-year cycle. The Bird Group will have the opportunity to make up for the 25 lost surveys during the autumn of 2021. It will be a very busy autumn.

3.3. Liaison with land owners

The liaison with land owners is explained in detail in Newsletter 1. The number of land owners that the Bird Group has contact with is still growing and currently stands at 149.

The good relationship between the Bird Group and land owners is very important to the project and each land owner will receive this newsletter, as well as an updated bird list for the relevant pentad.

4. Activities during lockdown

Covid-19 suddenly became a harsh reality for South Africans when the Level 5 lockdown came into effect on 27 March 2020. In order to mitigate the impact slightly the Bird Group initiated two activities for its members. The first was to make weekly lists of the bird species they could observe from their houses and gardens. The second was to compile an album from all the bird photos the members took from their houses and gardens. All members were encouraged to participate in the activities and it was thus not restricted to the 16 observers (individuals or couples) that had already contributed to SABAP2.

4.1. Level 5 lockdown combined bird lists

Two lists were compiled, one for Jongensfontein and one for Stilbaai. The species recorded were marked on the SABAP2 lists and it is thus easy to determine which species were not recorded during lockdown. Many of those were because their habitats were not covered by the houses and gardens.

- **Jongensfontein**

- 4 observers (individuals or couples) participated and compiled 15 lists over the 5 weeks
- The weekly species count varied between 44 and 48
- 60 species were recorded over the 5 weeks
- That is 86% of the total species of 69 recorded on the 6 SABAP2 full protocol cards for April
- The list is available at <http://www.u3astilbaai.org/birdgroup/documents/C-19-Jongensfontein-Vo%C3%ABllys.pdf>

- **Stilbaai**

- 19 observers (individuals or couples) participated and compiled 87 lists over the 5 weeks
- The weekly species count varied between 98 and 101
- 128 species were recorded over the 5 weeks
- That is 85% of the total species of 150 recorded on the 23 SABAP2 full protocol cards for April
- The list is available at <http://www.u3astilbaai.org/birdgroup/documents/C-19-Stilbaai-Vo%C3%ABllys.pdf>

4.2. Covid-19 lockdown bird album

One album was compiled for all the photos from Jongensfontein and Stilbaai and it was very popular. 38 photographers sent in hundreds of photos for 96 species. The album is however, more than just the number of species. For many species there were photos for male and female, as well as some juvenile birds. The album can be seen at

<http://www.u3astilbaai.org/birdgroup/photos.html>

5. Participation in the Virtual Museum project

5.1. Background

The [Virtual Museum](#) (VM) provides the platform for citizen scientists to contribute to biodiversity projects. This innovative concept was originally developed by the Animal Demography Unit at UCT in 2005. It is now managed by the [Biodiversity and Development Institute](#) (an independent non-profit company) and the [FitzPatrick Institute of African Ornithology \(UCT\)](#).

The VM collects photos, as well as the date and coordinates from where the photo was taken for a large number of projects (see website for more) such as frogs, butterflies, mammals, dragonflies, reptiles, scorpions, birds and more. The project covers a much larger area than Southern Africa and an increasing number of other African countries are actively participating.

The databases in the VM are used for multiple purposes. The most common use is to collate all the places where a species has been photographed, and to generate distribution maps for the species. The VM continues to generate up-to-date distribution maps for thousands of African species. Up-to-date maps are the primary need for biodiversity conservation. Without good maps, species conservation is just guesswork.

An important feature of the VM is that the photographer doesn't have to identify the species that is being photographed. The VM has panels of experts for the different projects that do identifications. This makes it possible for citizen scientists to contribute to the project without any detail knowledge of the species.

5.2. Stilbaai U3A Bird Group's contribution to the Virtual Museum

The enthusiastic participation of the Bird Group's members in the Stilbaai lockdown album led to the realisation that the Bird Group could make substantial contributions to the VM. To promote and sustain participation the Hessequa Virtual Museum album was created on the website of the U3A Stilbaai. Photos are posted in this album of species photographed in the Hessequa area and already submitted to and identified by the VM. The Bird Group's activities are obviously focussed on birds, but the members are also encouraged to submit photos for the other projects as well. The album has grown to such an extent that it has been divided into sub-albums for easier viewing. These albums can be viewed at [Hessequa Virtual Museum](#).

The latest (31 October 2020) version of the Hessequa album contains photos of 247 bird species out of a total of 330 species (75%) already recorded in SABAP2 in Hessequa up to 30 November 2020. Almost all of the species that were recorded on more than 1% of full protocol cards have been covered and it would obviously be much more difficult to get photos of the rare species.

The Hessequa album has photos of other species as follows:

- Birds with odd plumage – 4
- Frogs – 1
- Butterflies and Moths – 5
- Mammals – 24

- Dragonflies and Damselflies – 2
- Orchids – 1
- Weaver nests – 3
- Reptiles – 7
- Spiders – 5

However, the Hessequa album is only for interest and motivation, and the actual question is what the Bird Group is contributing to the VM. The VM collects information by Quarter Degree Square (QDS) and those that overlap with the 75 pentads in Hessequa are shown in Figure 6. Each QDS is shown in red and the boundaries of the 75 pentads in light green in the background.

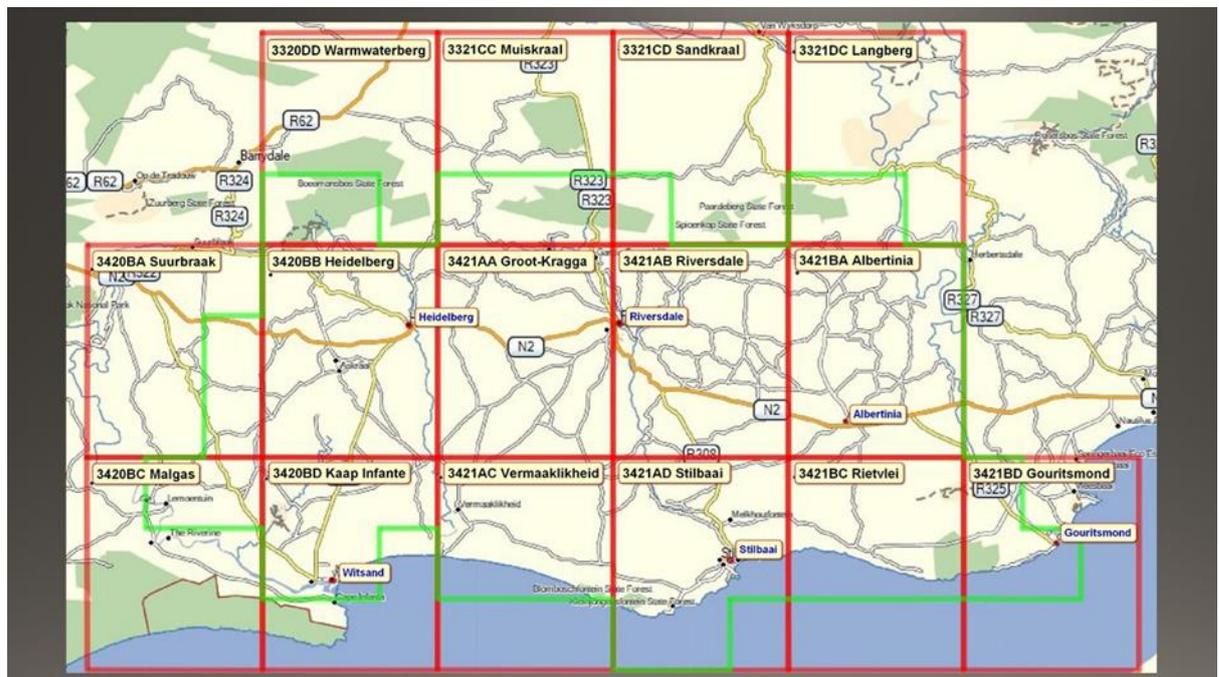


Figure 6: Quarter Degree Squares overlapping with the 75 Hessequa pentads

Table 1 below shows the increase in the number of bird species photos between April and December 2020 for each QDS. The bulk of the photos were submitted by members of the Bird Group. The increase in species varies between QDS, but the overall average increase for all 15 QDSs is 265%.

It is thus very evident that the Bird Group is making a significant contribution in the Hessequa area.

Table 1: Increase of bird species records in the QDS in the Hessequa area

	QDS no	QDS name	VM bird species	
			4/4/2020	22/12/2020
1	3320DD	Warmwaterberg	22	64
2	3321CC	Muiskraal	28	51
3	3321CD	Sandkraal	0	9
4	3321DC	Langberg	4	70
5	3420BA	Suurbraak	48	74
6	3420BB	Heidelberg	31	144
7	3421AA	Groot-Kragga	35	124
8	3421AB	Riversdale	50	123
9	3421BA	Albertinia	73	85
10	3420BC	Malgas	34	93
11	3420BD	Kaap Infante	19	92
12	3421AC	Vermaaklikheid	32	83
13	3421AD	Stilbaai	64	181
14	3421BC	Rietvlei	23	59
15	3421BD	Gouritsmond	37	76
		Total	500	1328

6. Summary

The U3A Stilbaai Bird Group has for the most part achieved the monitoring objectives for the year from 1 December 2019 to 30 November 2020. That is except for the 25 autumn full protocol cards that fell by the wayside due to the Covid-19 lockdown. The atlasers of the Bird Group will do everything within their power to catch up on these during the autumn of 2021. That will ensure that the objectives of the current two-year cycle will be achieved.

Members of the Bird Group used the lockdown period from 27 March 2020 to improve their knowledge of local birds by compiling bird lists from their homes and gardens, as well as to submit photos of their garden birds to the Bird Group's Covid-19 Bird Album.

That in turn led to the Bird Group's active participation in the Virtual Museum's projects. By the end of the year they had already made significant contributions to this project.

7. Acknowledgements

- 7.1. All 149 land owners that are friendly and helpful and still allow access for members of the Bird Group, or who are just interested in the project.
- 7.2. All 18 atlasers (individuals or couples) who up to now have participated in surveys for SABAP2 in Hessequa and who are still willing to adhere to the priorities that are set in order to achieve the Bird Group's objectives.
- 7.3. All the visitors that since the start of SABAP2 in 2007 laid the basis in the Hessequa area and are still doing a significant number of surveys each year in this area.

- 7.4. All 23 observers who participated in compiling the lockdown bird lists for Jongensfontein and Stilbaai.
- 7.5. All 38 persons that submitted photos to the Covid-19 Bird Album.
- 7.6. All 19 individuals or couples that are contributing photos to the Virtual Museum project.
- 7.7. The administrative and technical personnel of SABAP2 who are always ready to solve queries about card problems and who handle the submitted "Out-of-Range Forms" promptly and professionally.