FINAL PROJECT COMPLETION REPORT

I. BASIC DATA

Organization Name: Odette Curtis

Project Title: Linking landowners and small businesses with gamebird conservation and sustainable use in threatened habitats in the Cape Floristic Region

II. OPENING REMARKS

Provide any opening remarks that may assist in the review of this report.

Overall, I feel very satisfied about the outcomes of this project. Reasonable, achievable goals were set and almost all were achieved. I would like to thank the CEPF for granting me this opportunity – this project has opened doors for me in the conservation field – particularly the field I am most passionate about (renosterveld conservation). I enjoyed every part of the planning and execution of this project and feel it created a fantastic platform, not only for my conservation career, but for research and conservation-in-action in the lowlands of the Overberg.

III. ACHIEVEMENT OF PROJECT PURPOSE

Project Purpose:

This project aimed to investigate how natural resources (specifically gamebirds) can be used to benefit farming communities and small businesses (such as commercial wingshooting and local tourism operations), while at the same time providing conservation incentives on private land within the CFR (Cape Floristic Region). The project was therefore two-fold: first, there was the scientific element needed to test the links between gamebird populations and biodiversity, as well as testing the sustainability of the species as a commercial viability. Secondly, there was the element involving communities and businesses, which engaged the agricultural (farming) and small (commercial wing-shooting) businesses. The project therefore provided a platform on which landowners, small businesses, agriculture, researchers and wildlife managers can work together to promote the sustainable use of natural resources, as well as wise habitat management, with both commercial and conservation benefits.

Planned vs. Actual Performance

Indicator (copied and pasted from original LOI)	Actual at Completion
Assess whether managing renosterveld for gamebirds is beneficial to overall biodiversity and ecosystem functioning in renosterveld patches.	In terms of what was achievable within the budget and timeframe of this project, this objective was reached. The preliminary statistical results of the project suggest that there may be some link between gamebirds and 'healthier' habitats, but more detailed, rigorous statistical tests will follow before publication.
If a link between gamebirds and biodiversity is established, investigate strategies for optimizing habitats for Cape Spurfowl and Greywing Francolin within renosterveld patches in the lowlands of the Overberg, Western Cape.	Strategies for optimizing gamebirds would include promoting grass cover, through correct burning and grazing regimes (see detailed report for more info – Appendix 1). However, the thresholds for biodiversity and gamebirds may differ, in terms of burning frequency, and this needs to be investigated further.
Assess the potential for the commercial harvesting of gamebirds as an incentive for landowners to alter land management practices.	One-one-one interviews revealed that landowners are more willing to conserve gamebirds because of their aesthetic & sentimental value than they are to make a commercial business out of exploiting them for hunting.
Investigate the degree to which landowners value gamebirds on their property and are thus willing to adjust farming practices to promote gamebird populations.	One-on-one interviews were conducted with 20 landowners. Overall, landowners are very willing to improve / alter land management strategies, in order to promote gamebird populations and thus, overall habitat health – with no economic incentive.
Two ultimate objectives (although not necessarily feasible within this time frame) are: 1) to determine optimal harvesting levels which will ensure that both species can be harvested on a sustainable basis and 2) to determine optimal management strategies (in terms of e.g. grazing vs. fire management) for renosterveld fragments.	Although these objectives cannot be fully realized at this point, 1) francolin numbers appear to be too low, with a few isolated exceptions, to promote heavy exploitation of the birds as a commercially harvestable resource (mostly because of their fragmented habitats) and 2) optimal management strategies are being investigated further in the extended TMF-funded project, as well as through the formation of a gamebird working group (an outcome of the gamebird workshop). At the gamebird workshop held on the 27th August 2007, it was agreed that a 'safe' harvest would be about 33% of a covey of birds (for both species) (based on Rob Little's work on Greywing in the Eastern Cape). Also, shooting francolin commercially is only viable if sold with a 'package' – i.e. including shoots on geese and Guineafowl.

Describe the success of the project in terms of achieving its intended impact objective and performance indicators.

Overall, I believe this project to have been a success. Not only were all the significant goals and outputs achieved, but this project has also been used as a platform to continue similar work with

the same landowners (as well as new ones that are still becoming involved). This strengthens the long-term success of this project.

Were there any unexpected impacts (positive or negative)?
POSITIVE: The response of landowners to gamebirds as incentives for improve habitat management was stronger than expected. Contrary to what was expected, landowners value gamebirds purely for aesthetic or sentimental reasons, to a lesser extent for recreational hunting and at the very least, for their potential commercial value.
POSITIVE: Landowners expressed an overwhelming interest in renosterveld conservation, through their interests in Stewardship, as well as their interest in improving their veld management.

IV. PROJECT OUTPUTS

Project Outputs:

Planned vs. Actual Performance

Indicator	Actual at Completion
A comprehensive management plan for Cape Spurfowl and Greywing Francolin in lowland renosterveld fragments in the CFR, published in a format easily accessible to all interested parties.	This was not a goal for within the timeframe of this pilot study (it is unrealistic to expect to set such high goals, based purely on a pilot study). However, the gamebird workshop provided an excellent platform for information sharing, which can ultimately contribute towards the establishment of management guidelines for gamebirds in the CFR (see minutes from gamebird workshop – Appendix 2)
General awareness and appreciation for natural resources will be promoted among landowners and small businesses about a) the potential to exploit natural resources on a sustainable basis, and b) an understanding of the importance of conserving remnants of natural habitat on private land.	Significant awareness was created amongst landowners about both the exploitation of natural resources and the plight of renosterveld, through a number of means: 1) individual interviews with 20 landowners (where each landowner was explained the importance of renosterveld conservation, using visuals (maps showing the degree of habitat loss and photographs of charismatic flowers); 2) article published in the Farmer's Weekly; 3) colour brochures were distributed amongst about 50 landowners and 4) a stall was held at the Agricultural Show (Megaweek), demonstrating the importance and status of renosterveld.
The building of partnerships between conservation NGOs, private landowners and small businesses, potentially including BEEs, in the CFR.	Strong partnerships were established with CapeNature and private landowners. Few small businesses depend on francolin-hunting, thus very few individuals from this field were engaged. However, those that do depend on francolin harvesting were approached to

	attend the workshop – very few were able to attend.
Promotion of wise habitat management on private land and a willingness to cooperate with conservation initiatives (such as Stewardship) by landowners within the CFR.	Landowners (20 individuals) engaged for the purposes of interviews were made aware of conservation initiatives, particularly Stewardship, and were primed for being approached for Stewardship contracts in the future. It is likely that all these landowners will be willing to sign Stewardship contracts, as their understanding of renosterveld conservation has been greatly improved through these interactions. Other landowners were made aware through publications, brochures and presentations on a broader scale.
Land-management practices are likely to affect gamebird numbers, as well as general biodiversity. Thus, this project will also actively promote compliance with land use regulations (e.g. clearing aliens, avoidance of ploughing virgin land, fire management, etc.), as landowners who comply with these regulations are likely to increase biodiversity and gamebirds on their land. In this way, the need for such regulations may become clearer to landowners who previously may not have appreciated their value and importance.	Through a combination of education, awareness and the promotion of Stewardship (and in some cases, using the gamebirds as 'mascots' for conservation in the lowlands), landowners are more understanding of the importance of alien clearing, fire management and the fact that further ploughing of virgin land is no longer acceptable (or legal).

Describe the success of the project in terms of delivering the intended outputs.

The following has been achieved, in terms of measurable outputs:

- Article published in Farmer's Weekly (Appendix 3)
- Article in press with Africa Birds and Birding
- An initial awareness brochure, detailing the aims and methods for the gamebird research, was compiled and presented to the relevant landowners and other interested parties (Appendix 4).
- A gamebird logo was designed by a professional design company (Appendix 4) which was used for this project (on vehicles, letters, brochures, presentations, etc.) and will continue to represent the bigger Renosterveld Management Project.
- A proposal for extended 3-year project on renosterveld management (with further reaserch on gamebirds as a part of this) was submitted to TMF and approved. Therefore, another 3

years of research on renosterveld management will follow this pilot study (starting August 2007). This project is not only research-based, but has a significant component which focuses on working with communities and creating further awareness about renosterveld conservation in the Overberg.

- Aspects of this project and the extended TMF project were advertised and promoted at the Overberg Agri Farmer's Megaweek (29 August – 1 September).
- A Gamebird Workshop was held on the 27th August and although only 15 out of about 40 invitees attended, it was a productive workshop (and the minutes have been distributed to all invitees - see Appendix 2 for minutes of workshop).
- The landowners whose land the field work was carried out on were all presented with a detailed report of the findings of the overall project (Appendix 1), as well as any farm-specific information collected on their respective farms (Appendix 7). They were also presented with a CD of all the plant (and other) photographs taken on their farms during the gamebird / plant surveys.
- The objectives and preliminary results of the project were presented at the Fynbos Forum 2007.
- A diet study was initiated, which will continue over the next 2-3 years. Crops from about 50 birds have been collected so far from community shoots in the Overberg.
- Good partnerships were established with the following partners:
    - WWF: Rob Little provided valuable advise on the project design and interpretation of the results. He also attended and opened the gamebird workshop. WWF (through TMF) ultimately funded the extension of this project.
    - Western Cape Field Trial Club: Members from the WCFTC with suitably trained gundogs assisted with some of the bird surveys. Two committee members, also attended the gamebird workshop.
    - CapeNature Stewardship Project: Many of the landowners on whose land the surveys took place are potential Stewardship candidates. The Project Leader is now employed by CapeNature to get Stewardship contracts with these landowners and this has been made easier through her already well-established relationship with some of the key landowners. As the project demonstrated a willingness to

promote gamebird populations, irrespective of monetary gain, the potential for these birds to act as additional incentives for Stewardship is strong.

- Big Birds on Farms: Donella Young and I shared lifts and workshop opportunities, but, as mentioned, there is in fact little overlap between our objectives.
- Table Mountain Fund: The proposal submitted to TMF for more work in renosterveld (with gamebirds as a part of this project) has been approved. Thus, the partnership with TMF and this project is strong.

Were any outputs unrealized? If so, how has this affected the overall impact of the project?

The following partnerships were not strongly realized:

- AGRED: (although I have been invited by the Director, Aldo Berruti, to present a paper on the gamebird work at the PAOC (Pan-African Ornithological Congress) in 2008. Agred supported the project in principle, but our objectives are slightly different and therefore, Agred played no role in the development of this pilot study. However, members from the WCFTC and the proposed Gamebird Forum (including myself) (see minutes from workshop – Appendix 2) have commented on proposals by Agred to unify hunting seasons, etc., thus we have a working relationship with them.
- The Black Harrier Project: Data from the harrier project did not contribute to the analyses in this project – I opted to collect my own, standardised data. This has not had an impact on the project reaching its overall objectives.

IV. ADDITIONAL FUNDING

Provide details of any additional donors who supported this project and any funding secured for the project as a result of the CEPF grant or success of the project.

Donor	Type of Funding*	Amount	Notes
TMF (WWF)	C	R460 400	This funding is not directly linked to the gamebird project, but aims to build a better understanding of renosterveld management

Additional funding should be reported using the following categories:

- ***A*** *Project co-financing (Other donors contribute to the direct costs of this CEPF project)*
- ***B*** *Complementary funding (Other donors contribute to partner organizations that are working on a project linked with this CEPF project*
- ***C*** *Grantee and Partner leveraging (Other donors contribute to your organization or a partner organization as a direct result of successes with this CEPF project.)*
- ***D*** *Regional/Portfolio leveraging (Other donors make large investments in a region because of CEPF investment or successes related to this project.)*

V. SAFEGUARD POLICY ASSESSMENTS

Provide a summary of the implementation of any required action toward the environmental and social safeguard policies within the project.

N/A?

VI. LESSONS LEARNED FROM THE PROJECT

Describe any lessons learned during the various phases of the project. Consider lessons both for future projects, as well as for CEPF's future performance.

Project Design Process: (aspects of the project design that contributed to its success/failure)

- Goals were realistically set and therefore, achievable.
- It is unrealistic to attempt to build partnerships with projects with which there is very little in common. For example, although the 'Big Birds on Farms' project is also taking place in the Overberg, this project focuses a lot more on birds in transformed habitats (productive lands) and therefore, building a strong partnership between the two is almost contrived. However, presenting a united front to landowners is important, but this should be a sufficient link between the two projects. Forcing partnerships between projects which do not in fact overlap should not be insisted upon.

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Project Execution: (aspects of the project execution that contributed to its success/failure)

- Strict timetables were set and adhered to, thus the execution of the project was relatively smooth.
- However, time schedules were tight and fairly inflexible – i.e. did not allow for unexpected problems, such as illness or car problems! This was unavoidable, however, as the sample sizes were already limiting (because of the need to repeat surveys three times). Thus, there would be few ways to avoid this.
- Writing articles for magazines does not always mean they will be accepted! Despite contacting Landbouweekblad several times, they have still not published anything about the projects. I continue to pursue this!
- Workshops are not always well-attended, no matter how genuinely interested people may be. Expecting busy farmers to give up precious time for a half-day workshop (even out of the sowing or harvesting season!) is asking a lot. This was the reason that despite inviting 40 people to the gamebird workshop, only 15 were able to attend. This does not represent a lack on interest, but simply a time constraint on the part of most landowners. Most are very interested in the outcome of the project and the minutes are being distributed to them.

VII. ADDITIONAL COMMENTS AND RECOMMENDATIONS

Budget: See Appendix 5 for a summary of expenses. Overall, the budget was well-planned and appropriate for the project.

Further details from this project are included in the Appendices.

APPENDIX 1: PROJECT REPORT FOR THE GAMEBIRD PROJECT: RESEARCH ASPECTS

The following report is being sent to farmers and other participants, as part of the feedback to landowners on whose land I worked.

PROJECT REPORT FOR THE GAMEBIRD PROJECT

Odette Curtis 2007

This project comprised two main components: 1) investigating the links between Cape Francolin (Spurfowl) and Greywing Francolin (hereafter referred to as 'gamebirds') populations and renosterveld management strategies (i.e. testing the existence of a link between gamebirds and biodiversity and other indicators of habitat health); 2) investigating landowner attitudes towards a) gamebirds and their potential for commercial harvest and b) renosterveld conservation.

A summary of results:

1A) THE LINK BETWEEN GAMEBIRDS AND HABITAT MANAGEMENT: VEGETATION STRUCTURE

Key Questions

a) Is gamebird abundance affected by farm management? i.e. Are renosterveld fragments with higher numbers & densities of gamebirds in 'better condition' (e.g. higher % grass cover, higher plant diversity) than those with fewer birds?

b) Can gamebirds be used as an incentive (through their economic or aesthetic value) for improving the management of renosterveld fragments?

Methods

- Twenty renosterveld fragments were surveyed three times each (April/May; May/June; June/July), using pointing dogs / bird-dogs (my own trained Brittanies) to locate all (or as close to this as possible) the Cape Spurfowl & Greywing Francolin within each fragment.
- The time spent in each fragment was recorded and the numbers of birds found were recorded, so that an index of abundance could be calculated (i.e. the number of birds counted ÷ time spent in the fragment).
- During Autumn, vegetation surveys for vegetation structure were carried out. These were simply point counts – walking a 100m transect with a pole and dropping the pole every 2m and recording the species and their maximum height for everything that touched the pole. This was repeated 4 times within each fragment. These data provide information on the vegetation height and structure (e.g. amount of shrub vs. grass) and is therefore a useful indicator of veld management.
- During Spring, vegetation surveys for biodiversity were carried out. This was done using a $1m^2$ quadrate. The quadrate was randomly thrown in three different locations on two different slopes (with different aspects – mostly north and south), totaling six quadrates for each fragment. Each species within the quadrate was recorded and its cover estimated into a category (<5%, 5-10%, 10-25%, 25-50%, >50%). These data provide information on plant cover and diversity.
- Gamebird abundance data (i.e. abundance indices) were compared with vegetation structure, height, diversity and cover, using statistical tests, to see if any real relationship exists between gamebird numbers and habitat condition / management.

Preliminary results: Influences on gamebird abundance (** please note: these are only *preliminary* results, as the data have only been subjected to initial, simple statistical analyses. More rigorous analyses will take place before this is submitted as a scientific publication).
Analyses were carried out using both the maximum count (i.e. the highest recorded number of birds) and the average count, as both can be representative and it is not yet certain which number is more appropriate. Average counts are tabulated below (Table 1) and some interesting findings are illustrated and discussed below.

Table 1 Summary of average, minimum and maximum counts for Greywing and Cape Francolin

	Average	Min	Max
Time	125	49	183
Greywing	8	0	82
Capes	9	0	51

Figure 1 illustrates the significant decline in Greywing numbers across the three counts. This can be attributed to 3 factors: 1) the birds moved into the surrounding pastures and croplands after sowing in late-April, 2) birds started paring off early (mid-late July) (see Figure 2 for support of this) and 3) a natural density-dependent die-off of birds (pers. Comm. Rob Little). Cape Francolin numbers showed a similar, but not significant (i.e. real) trend.

Francolin and vegetation structure

Greywing:

MAX COUNTS:

- Positive correlation with burning frequency (P = 0.021) – i.e. more frequently burned fragments had a higher number of Greywing.

AVERAGE COUNTS:

- Positive correlation with % grass cover (P = 0.035) – i.e. Greywing are associated with grassier fragments.

Capes:

MAX COUNTS:

- Positive correlation with % grass cover (P = 0.005) – i.e. Capes are associated with grassier fragments.
- Positive correlation with % *Themeda* (Rooigras) cover (P = 0.037) – i.e. Capes are associated with fragments with a higher proportion of Rooigras.

AVERAGE COUNTS:

- Positive correlation with % grass cover (P = 0.024) – i.e. Capes are associated with grassier fragments.

Better managed' habitats are generally associated with more grass (particularly palatable species, such as *Themeda*). Subjectively, this could suggest a link between gamebirds & 'better managed' habitats. However, one should treat these results with caution, as grassier habitats may also be those that are burned more frequently – and the implications that higher burning frequencies have for biodiversity are not yet known. Therefore, further research is required to understand 'optimal' burning frequencies for promoting biodiversity (particularly plant diversity), while at the same time benefiting potential agricultural benefits (e.g. grazing or promoting gamebird populations).

B) THE LINK BETWEEN GAMEBIRDS AND HABITAT MANAGEMENT: VEGETATION DIVERSITY

Methods:

In order to capture the diversity of the vegetation, six 1x1m quadrates were dropped randomly at each site, over two different aspects (e.g. 3 on a north- and 3 on a south-facing slope). All species within a quadrate were recorded and their cover estimated to a category (<5%, 5-10%, 10-25%, 25-50%, >50%).

Preliminary results:

Data analysis for this is not yet complete.

Species : Area and slope steepness

Initial analyses of the slope steepness of the species : area curves suggest there is no relationship between gamebird abundance and species diversity. The purpose of this method is to compare how quickly species accumulate in a species count over the same area (in this case, $6m^2$) and compare this rate of accumulation (i.e. the steepness of the slope) between areas and with bird counts.

Analyses focusing on specific groups (e.g. bulbs, shrubs, grasses) are still pending.

Conclusions:

The fact that it was difficult to detect a relationship between these birds and plant diversity within a fragment is not surprising. Birds respond to several factors within a habitat, including microhabitats, availability of water, availability of food, pressure from predators and cover available for hiding from predators. For Cape Francolin, is it clear that they are focusing on fragments with sufficient cover in the form of seepage areas with *Juncus* (reed) / *Asparagus* thickets (personal observations), as opposed to thickets of Wild Olive and Milkwoods. Thus, their main objective is to find suitable roosting sites (see Rob Little's work) and fragments without these microhabitats are unlikely to harbour high numbers of Cape Francolin. For Greywing, the microhabitats are not as defined, but they require open areas, combined but with sufficient cover to avoid predators. It is likely that further analyses will strengthen the relationship between both species and a higher proportion of grasses within a fragment.

2) LANDOWNER ATTITUDES TOWARDS GAMEBIRDS & RENOSTERVELD:

Key Questions:

a) What is the perceived value of gamebirds for farmers?
b) Is there potential to promote improved habitat management in favour of birds?

Methods:

One-on-one interviews were carried out with twenty landowners.

Results:

GENERAL BACKGROUND

- Average farm size: 2357 ha (770-9000 ha)
- Average amount of renosterveld: 350 ha (70-900 ha)
- Why have you retained your renosterveld?
  - 89% : not workable (too steep, too rocky)
  - 39% : conservation
  - (some said both)

QUESTIONS RELATING TO GAMEBIRDS:

- 22% of landowners attempted to estimate the number of birds on their property, the rest know nothing about their gamebird populations
- 17% hunt the birds themselves on a seasonal basis
- An additional 28% allow others to hunt or hunt themselves, but very occasionally

<u>Value of the birds to landowners…</u>

- 89% valued the birds for AESTHETIC reasons

- Only 39% valued the birds for RECREATIONAL hunting purposes
- None valued them because of their potential commercial value (although 2 (11%) mentioned they were interested in exploring this option)
- None currently actively manage the veld for the birds
- 94% would manage for the birds, if the information was available…. When asked 'why':
    - 83% said 'because I like to look at them' – or something to that effect ('they add life to the farm')
    - 11% said 'to shoot more'

Management strategies:

Management of renosterveld differs significantly between different landowners:

Burning:

- 50% of landowners burn every 5-7 yrs
- 50% never burn

Grazing:

- 58% of landowners use renosterveld for grazing
- 17% graze very seldom
- 25% do not graze renosterveld at all
- grazing days vary from 3 weeks – 6 months per annum
- number of animals on a patch varies between 200-600 ewes or 20-120 cows

Other incentives for improved habitat management:

- 28% : no need for incentives
- 11% : want to explore the tourism potential
- 17% : want to know how to improve the grazing value
- 22% : knowledge
- Also: help with management; being acknowledged as a landowner for good management (plaques on gates, etc.).

Other important outcomes:

- Renosterveld is seen as harboring caracal: thus, in some cases, it is managed to reduce thick cover, where caracal hide.
- Thistles are one of the biggest management-challenges for farmers owning renosterveld (some are afraid to burn because of the invasion of thistles post-fire). This issue needs to be addressed as a matter of priority. There are misconceptions about how to control thistles – landowners need to understand that increased disturbance (i.e. fire and grazing) encourages thistles.
- Getting permits to burn is more and more difficult for farmers, thus old, moribund veld is often left unburned. This has dire consequences for both the grazing component of the veld, as well as its biodiversity.
- Many farmers would like to conserve, but lack funding for fencing.
- Farmers are keen for KNOWLEDGE, particularly with regards management regimes (burning particularly) & farm-specific information (e.g. rare plants, veld types, etc.).

FURTHER RENOSTERVELD-GAMEBIRD RESEARCH REQUIRED:

- Are gamebird numbers high enough & stable enough to sustain commercial shooting? (Although it is generally agreed that they are not).
- What are the optimal off-take levels for both species that ensures a sustainable harvest?
- What influences breeding success of Cape & Greywing Francolin in renosterveld fragments?
- How do gamebirds use the habitats available to them (transformed & untransformed) for feeding?
- What do the birds eat in renosterveld?
- How can habitats be managed in a way that is beneficial to gamebirds, livestock & ecosystem integrity (biodiversity)?

Preliminary conclusions

- Link between gamebirds & veld management: possibility that birds are associated with grassier fragments and therefore possibly 'better managed' habitats. However, grassier habitats are generally associated with higher fire frequencies and the effects of this on biodiversity in renosterveld are not known. Thus, it is not yet certain whether these grassier fragments are in fact 'healthier' -this requires further research.
- There is currently minimal commercial use of Cape and Greywing Francolin – most agree that their populations are too small to handle this. They can (and are), however, be hunted commercially as part of a 'package' – i.e. including Egyptian and Spurwing Geese and Guineafowl.
- Numbers from the counts in this study also suggest there are too few birds to hunt on a large commercial scale.
- Gamebirds ARE valued by farmers, but mostly for aesthetic / sentimental reasons.
- There is enormous variation in management strategies & therefore, incentives for farmers owning renosterveld fragments. There is obviously a dearth of knowledge when it comes to advising landowners on how to manage renosterveld. For now, we can recommend using the guidelines attached (Appendix A).
- Gamebirds CAN be useful incentives for improved habitat management in *Critically Endangered* renosterveld!

ACKNOWLEDGEMENTS

I should like to thank the following landowners for their time and for allowing me to work on their land: Murry Weiner, Luke Cornel, Philip Myburgh, Xavier Badenhorst, Valerian van der Byl, Ian Le roux, Solms Beyers, Piet Neethling, Alex Neethling, Richard Krige, Peter Delport, Francoise Uys, Simon Streicher, Boeta Wessels, Wynand Du Toit, Wynand De Wet, Johanus Schoonwinkel, Albert Bester, Jonico Swart, Dirk van Papendorp, Trevenen Barry, Tom Barry, Nelis Swart. Most importantly, to the bird-dogs who over-worked themselves and made this project possible: Luka, Chloë, Lady and Jasper. To Cornel, Isabel and Sumarius Uys for lending Lady and Jasper to me for the surveys. And to Bennie van der Merwe for trusting me with his pointers, Nina and Levi. Nick Walker and his Regan and Fergi for helping with surveys. Solms Beyers for helping to collect diet samples at community shoots. To Rob Little, WWF, for his input into the design of this project, as well as for convening the gamebird workshop. And to the CEPF for funding this work.

FOLLOW-UP PROJECT:

The TABLE MOUNTAIN FUND (TMF), an offshoot of WWF, has approved a proposal that I sent in to work on renosterveld management issues for the next three years. The project will focus on addressing burning and grazing issues in Overberg renosterveld and aims to identify what the best burning and grazing regimes are that benefit biodiversity and agriculture simultaneously. The project started in Spring (September) 2007 and will run until 2010. Landowners can contribute in the following way:

1) If you can supply us with information on your past and present management strategies, please contact us. We are looking for farms to survey and compare results from the field with management practice.
2) Tell your friends and neighbours about the project and get us in contact with them.

And in the meantime, please remember (and tell your friends / neighbours) every bit counts! It is also illegal to plough virgin land without a permit – the consequences include a fine and the rehabilitation of the land at the landowner's expense. This is because renosterveld is a *Critically Endangered* habitat and we cannot afford to lose anymore! Since it is 'useless' for agriculture, why not so something good with it and conserve it – simply by fencing it off and improving your management strategies!

APPENDIX 1(A) GENERAL GUIDELINES FOR MANAGING OVERBERG RENOSTERVELD FRAGMENTS, FOR MAXIMISING GRAZING BENEFITS AND MAINTAINING BIODIVERSITY.

We currently know very little about renosterveld management, so the following is merely a guideline, based on the knowledge we currently have, for managing renosterveld fragments in the Overberg, with the primary goal being to maximise benefits for both agriculture (grazing) and conservation (the maintenance of biodiversity and ecosystem functioning). Please contact me if you have any other questions, or would like to know more about assessing the quality of your own veld (we are currently working on research projects which will help us address these issues).

Some basic 'must do's and don'ts':

- Fence off all fragments, so that livestock access can be controlled. It is best to do this with standard stock fence (as opposed to oogiesdraad or jackal-proof fencing, as these fences prevent the movement of tortoises and other important small animals).
- Burn in Autumn (summer / spring burns kill off geophytes (bulbs))
- Do not burn too frequently (every 10-12 years or so is probably ok, although we know very little about this, so rather be safe than sorry!). Optimal burning frequencies probably vary with rainfall, where areas with higher rainfall (>400 mm) require higher burning frequencies. Work in the southern Overberg in high-rainfall areas suggests a burning frequency of 3-5 years in order to maximise the proportion of Rooigras in the renosterveld. The effects of such frequent burning on biodiversity in the long-term are not yet known, thus these suggestions should be treated with caution. If the veld is left too long before a burn, the grazable component of the veld will diminish, as will the diversity.
- NEVER graze immediately after a fire – rest the veld for a minimum of 18 months (or more!) before grazing (and then do so only in the late summer – early autumn months, for a short, intense period – see grazing guideline below). Grazing before this will put favourable (palatable species) at a disadvantage when recovering after a fire and they will not be able to compete with less-favourable (unpalatable) species, such as Renosterbos and Kraalbos. Resting allows all species an equal opportunity to rejuvenate after a fire and therefore, promotes the 'wanted' species, like Rooigras. Grazing too soon after a fire will promote unfavourable species, at the expense of favourable ones, thus causing the veld to be dominated by less favourable plants (which is what has happened to most renosterveld and is the reason it looks merely like 'bossieveld' today – historically, it was not so drab and useless!). Correct management promotes the more favourable species, so that in the long term, grazing *quality* is higher.

Useful tips

- High burning frequencies and high grazing intensities also promote the spread of thistles, as these benefit and thrive where disturbance is highest ('disturbance'= trampling, grazing, fire, etc.).
- A dominance of Kraalbos and / or Renosterbos is a sure sign of overgrazing. Even if this occurred many years before, the effects are long-lasting. Sometimes, the solution is to burn, but again, the most important thing here is to REST the veld after the burn.

GRAZING GUIDELINES FOR RENOSTERVELD FRAGMENTS

The veld should not be grazed for a minimum of 18 months after the burn and the grazing period hereafter should be short and intense. Current knowledge suggests that grazing should only take place between late November and early March (as this promotes bulbs and grasses). Current recommendations for stocking rates in lowland renosterveld areas with an average annual rainfall of between 400-600 mm are 4-10 ha per

LSU (Large Stock Unit) and 0.6-1.6 ha per SSU (Small Stock Unit). However, in areas with less than 400m rainfall per annum and areas where veld has been significantly degraded though previous mismanagement, lower stocking rates are recommended. Because area-specific knowledge in this field is lacking, constant monitoring of the veld for signs of overgrazing is essential. At present, scientific studies carried out thus far suggest the following broad guidelines for renosterveld grazing and burning:

- No live stock allowed in the renosterveld Camps during winter to early summer.
- Use renosterveld Camps as reserve food sources in the summer.

To encourage grass, burn in autumn before resting. Spring burning followed by grazing leads to dominance by Renosterbos.

The following are useful indicators of overstocking and, where these are witnessed, animals should be removed from the camp immediately and the veld left to rest until it has recovered:

a) Where Rooigras *Themeda triandra* occurs at significant densities and is therefore a useful indicator of overgrazing:

- If flowering stems have been grazed off of more than 85% of *Themeda triandra/ Rooigras* bunches in a camp, all livestock have to be removed from the camp.
- If flowering stems have been grazed off of more than 90% of *Themeda triandra/ Rooigras* bunches in a camp, the vegetation (Renosterveld) is overgrazed. All livestock must immediately be removed from the camp / contract reserve.

b) Where Rooigras occurs at naturally low densities in the veld and is not useful as an indicator species:

- Heavy browsing of 85% of all individuals of high and medium palatability species
- Browsing of 30% of low palatability species (such as Renosterbos) is noted, stock should be removed and the veld rested until recovery is seen.
- Signs of trampling and soil degradation, especially destruction of 70% or more of living soil crust cover formed from algae and mosses are an indicator of overstocking and all livestock should be removed from the area until recovery is visible.

Where red data book species are present, these should be carefully monitored for signs of negative impacts from grazing and stocking timing and densities adjusted accordingly.

** This information was gathered by Sue Winter and Dr. Sue Milton, who are thanked for allowing it to be used here.

Other references / further reading:

Cowling RM, Pierce SM & Moll EJ 1986 Conservation and utilization of South Coast Renosterveld, an endangered South African vegetation type. Biological Conservation 37: 363-377

Rebelo A 1995 Renosterveld conservation and research. Pages 33-43 in Low AB and Jones FE (eds) FCC report 95/4 Botanical Society, Kirstenbosch

Tainton NM (ed) 1999. *Veld Management in South Africa*. University of Natal Press, Pietermaritzburg.

Walton BA 2006 Vegetation patterns and dynamics of Renosterveld at Agter-Groenberg Conservancy, Western Cape, South Africa. MSc thesis, University of Stellenbosch.

APPENDIX 2: MINUTES FROM THE GAMEBIRD WORKSHOP

Gamebird workshop held on the 27th August 2007, Integration Centre, Bredasdorp.

Attendees: Mick D'alton, Dr. Rob Little, Dr. Bennie van der Merwe, Dr. Bob Winter, Kevin Shaw, Rhett Hiseman, Rocco de Villiers, Valerian van der Byl, Steven du Toit, Ivan Volschenk, Kris Fairall, Trevenen Barry, Tom Barry, Lindsay Madden, Odette Curtis.

Dr. Rob Little opened and convened the workshop.

Odette Curtis: purpose of the workshop:

- To all meet and discuss 'burning issues' around gamebird utilization in the Overberg (incl. Lindsay Madden's proposal).
- Get a clear understanding of who the key roleplayers involved are: incl. farmers, wingshooters & managers.
- Discuss the status of our understanding of gamebird populations, present results from a current study and decide on a way forward.

Presentations:

Lindsay Madden: Gamebird Hunting Proposal

Lindsay Madden ran through a proposal that he has put together, which focuses on a number of issues around gamebird hunting in the Western Cape – this proposal is available for distribution (contact Lindsay lmadden@mweb.co.za).

Some of the issues raised in Lindsay's proposal:

- CapeNature could lower the price of hunting licenses, or charge a daily hunting fee
- CapeNature could make it sensible and attractive to buy a hunting license
- What is happening to data that goes back to CapeNature? No access to this, so why send data in to them - what are the rewards?
- Qualifying course for hunting proficiency: can this be enforced and regulated?
- Need for electronic database for all information to be loaded and accessed
- Enforcement of hunting licenses, etc. not effective presently: suggest making it self-regulatory, using voluntary rangers, etc.
- Use communities to collect data
- Market gamebird shooting as a premium 'day's walk in the country' – *quality, not quantity*!
- CapeNature: make hunting licenses available over the internet

Bob Winter: Contributions by the Western Cape Field Trial Club to gamebird monitoring

Bob's presentation summarized:

WCFTC stands for the Western Cape Field Trial Club, a club that was founded in 2000 by a small band of very strange people who are fanatical about pointing dogs.

- Our members come from all over the Western Cape - as far afield as Plettenberg Bay and Piketberg. What binds us together is a love of pointing dogs, an essential part of which is the sport of Field Trialing.
- The club is affiliated to the National Field Trial Association, and runs one Field Trial in the Overberg in May of each year for British Breeds (Pointers & Setters) and one Field Trial for Continental Breeds (the Hunt, Point & Retrieve Breeds – German Shorthaired Pointers, Brittanies, Hungarian Vislas, and Weimaraners are the most common in our club) (although all breeds can run in both).

What is a Field Trial?

- It is a competition brought into existence to resolve a huge problem among pointing dog (and other gundog) breeds – we all know that every hunter has the best dog. So how do we resolve the endless disagreements between hunters as to whose hunting dog is really the best?
- That is what Judges at Field Trials try to decide for that competition under those conditions and on those gamebirds.
- Field Trials are meant to provide as real a hunting situation as possible that makes real hunting demands of the dogs and provides the Judges with real hunting performances on which to base their decisions.
- Very importantly, pointing dog Field Trials in South Africa are exclusively run on the natural game that variously occurs in our diverse gamebird habitats. To be able to run Field Trials like this is a rare privilege indeed and puts our Field Trials in a very exclusive category by world standards.

How is a pointing dog Field Trial run?

- The Field Steward divides the entire field of competitors into pairs (braces).
- Each brace is then hunted over continuous ground cover where the dogs can be seen by a panel of 3 Judges. These braces are then mixed and matched and alternated until all competitors have been judged a number of times.
- Each dog must find game, point that game, the dog must be steady to both flush and a mandatory shot and the dog must "honour" the pointing of other dogs.
- In Field Trials for British Breeds, dogs are not required to retrieve. Gamebirds are therefore not shot at these Field Trials - handlers simply carry shotguns and fire blanks when they would otherwise have shot the birds while hunting.
- The Hunt Point and Retrieve breeds are additionally required to retrieve, and in order for these capabilities to be judged, gamebirds are required to be shot – this done under very carefully controlled conditions by two appointed guns.

Why is retrieving so important?

- For one, these dog's water entry and swimming is a lot better than most peoples!
- Two, there is a strong ethical requirement that all shot game is recovered.
- Three, there is a strong ethical requirement that all wounded game is retrieved as quickly as possible.

So, for the Continental Breeds, we really do have to shoot some birds.

But how many? Surely for an entry of 40+ dogs this must result in a slaughter? Not at all. Actually we shoot very few birds. On average, in the course of a Field Trial, we shoot between 1/3 - 1/2 bird per dog. For a 40-entry field that amounts to 12 - 20 birds. If that sounds like a lot, remember that that takes place over 2½ - 3 days over about a dozen different farms. That works out at between 1 - 2 birds per farm, and about 4 – 8 birds per day in total.

If we aspire to continue to exist as a club, whatever we do, it must be sustainable – bottom line.

Modus Operandi

- Prior to our first HPR field trial, we conducted intensive surveys on every potential venue.
- In addition to good gamebird numbers we were looking for sufficient continuous and viable cover to be able to run the requisite number of braces.
- We recorded all game seen, worked by the dogs and re-worked once they had re-located.
- We obtained a full set of orthophoto's covering all of our short-listed venues and plotted the approximate positions of all coveys on the maps.
- We then kept up intensive annual surveys to enable us to plot the year-on-year counts.

Some conclusions:

- Average Francolin covey size is 8 in a range from a pair to 22 birds. This has been relatively constant since 2003, but a boom in covey size in 2007.
- Average Partridge covey size is 9.6 in a range from a pair to 23 birds. This has been relatively constant since 2003, but a boom in covey size in 2007.
- The WCFTC dataset is almost irrelevant to the question of what a sensible bag limit should be as we are unable to establish any direct link between bag limits, sustainability and population viability.
- The WCFTC experience has not established what a maximum sustainable covey harvest percentage might be – we have only occasionally shot 30% of a covey and very, very rarely more.
- But we do seem to have established from our experience that if no more than 30% of the total is harvested, that should be sustainable in a normal season. We arbitrarily based this on Rob Little's work on Greywing in the Eastern Cape, and it has worked very well for us so far!

Some personal conclusions:

- I do not believe that the Francolins & Partridges in the Overberg are really a sustainable commercial resource on any significant scale. For numbers we simply cannot compete with the Eastern Cape, Free State, Northern Province and Mpumalanga, and those are the areas where the value-for-money standards will be set. Hunters, and particularly foreign hunters, will expect comparable value for money that we cannot deliver on a sustainable basis. And even in the Eastern Cape, disappointment is emerging among landowners with the rewards from commercial partridge shooting.
- However, I do believe that commercial shooting is sustainable on a small scale, provided that each covey is shot only once in a year and no more than 30% is harvested. But that severely restricts the scale of what is achievable, which means that this will never amount to a really significant mainstream commercial resource.
- I think we should accept our limited gamebird resource for what it is, and not be seduced by delusions of great untapped riches just waiting to be unearthed by creative and aggressive marketing.

BUT

- How representative is the WCFTC experience of the entire Western Cape?
    - We need information that can only come from intensive research.
    - But research costs money.
- How can this be translated into sensible, meaningful and enforceable legislation?
    - We have established no direct relationship between population viability and bag limits.
    - But to impose no bag limit at all is to provide carte blanche.
    - To impose sensible bag limits sends an important message and does restrain law-abiding hunters.
    - Not perfect by a long shot, but some restraint is better than no restraint.
    - You can legislate but you cannot enforce how often coveys can be shot.
    - You can legislate but you cannot enforce a maximum covey harvest.
        - But you can try to educate hunters and the general public. There is a crucial role here for the Hunting Associations and Field Trial Clubs -
        - Place great emphasis on codes of ethics.
        - Preach restraint and place great peer pressure on restraint.
        - Preach the quality of the experience and not the size of the bag.
        - Preach the rarity value of our gamebird resource and foster appreciation.
        - Alternatively…….

Just get a dog – that will make the size of the bag irrelevant.

Just a Dog

From time to time, people tell me, "lighten up, it's just a dog," or, "that's a lot of money for just a dog." They don't understand the distance travelled, the time spent, or the costs involved for "just a dog."

Some of my proudest moments have come about with "just a dog."

Many hours have passed and my only company was "just a dog," but I did not once feel slighted. Some of my saddest moments have been brought about by "just a dog," and in those days of darkness, the gentle touch of "just a dog" gave me comfort and reason to overcome the day.

If you, too, think it's "just a dog," then you will probably understand phrases like "just a friend," "just a sunrise," or "just a promise." "Just a dog" brings into my life the very essence of friendship, trust and pure unbridled joy. "Just a dog" brings out the compassion and patience that makes me a better person.

Because of "just a dog" I will rise early, take long walks and look longingly to the future. So for me and folks like me, it's not "just a dog" but an embodiment of all the hopes and dreams of the future, the fond memories of the past, and the pure joy of the moment. "Just a dog" brings out what's good in me and diverts my thoughts away from myself and the worries of the day.

I hope that someday they can understand that it's not "just a dog" but the thing that gives me humanity and keeps me from being "just a man." So the next time you hear the phrase "just a dog," just smile, because they "just don't understand."

Odette Curtis: Using gamebirds as incentives for improved habitat management in Critically Endangered renosterveld habitats

Summary of points presented:

- Most landowners regard Renosterveld as 'Uitvalgrond' – a grey, dull habitat which is only in a few places because it could not be ploughed (mostly because it was either too steep, too rocky or too wet).
- Few people realize the botanical gems that are hidden in the renosterveld – which world-renowned for its exceptionally rich botanical diversity (and is part of the Fynbos biome, which is one of the world's 34 biodiversity hotspots).
- In many cases, mis-management has turned this veld into a 'boring', 'ugly', homogenous vegetation type, while historically, it was a rich, diverse system (and in many areas, particularly rich with the valuable grazing grass *Themeda triandra* (Rooigras).
- Today there is 4-7% renosterveld remaining in the world = *Critically Endangered* habitat.
- Almost all renosterveld is in private ownership – none in Provincial Nature Reserves or National Parks (apart from a small amount in Bontebok NP).
- Thus, working with landowners and finding incentives to motivate renosterveld conservation and improved management is most NB.
- Some existing incentives include: tax rebates, management aid (alien clearing, fencing, burning, etc.), advice on management, conservation of iconic species, renosterveld as a natural pasture. Possible incentive: sustainable use of resources from renosterveld, e.g. gamebirds?!
- Project funded by the Critical Ecosystem Partnership Fund (CEPF) to look at the possibility of using gamebirds as incentives for improved management in renosterveld.
- GAMEBIRD UTILIZATION IN THE OVERBERG: currently a recreational activity, with some small commercial ventures (including guineafowl & waterfowl), community shoots & annual field trials with pointing dogs
- If we can show a link between well-managed renosterveld fragments & higher gamebird populations, can the birds be used as an incentive for renosterveld conservation?
- Therefore, Key Questions:
    - Is gamebird abundance affected by farm management? i.e. Are renosterveld fragments with higher numbers of gamebirds in 'better condition' (e.g. higher % grass cover, higher plant diversity) than those with fewer birds?
    - Can gamebirds be used as an incentive (through their economic or aesthetic value) for improving the management of renosterveld fragments?

- Methods:
    - Survey 20 renosterveld fragments (3 X each), using gundogs, and record numbers of Cape Spurfowl & Greywing Francolin.
    - Carry out vegetation surveys in the same 20 fragments, in order to gauge the vegetation composition, structure & diversity & compare these with bird densities.
- Preliminary Results:
    - AVERAGE # COVEYS PER PATCH:

Capes: 1.53 (0 – 5); Greywing: 1.35 (0 – 7)

    - AVERAGE # BIRDS PER COVEY:

Capes: 6 (max = 32); Greywing: 7 (max = 20)

    - ON AVERAGE, PROBABLY NOT LARGE ENOUGH TO SUSTAIN HEAVY SHOOTING (with few exceptions)
    - Counts for Greywing declined significantly from April to August, probably because 1) birds move into productive lands after sowing and therefore spend less time in the veld, 2) birds appear to start pairing off in late July and 3) there is always a natural decline in gamebird counts through winter: the birds exist in a density-dependent pressure system, where they compete for mating opportunities (unsuccessful birds are pushed out and these starve or are predated) – (comment added by Rob Little).
- GREYWING:

MAX COUNTS: Positive correlation with burning frequency (P = 0.021)
AVERAGE COUNTS: Positive correlation with % grass cover (P = 0.035)

- CAPE (SPURFOWL) FRANCOLIN:

MAX COUNTS: Positive correlation with % grass cover (P = 0.005); Positive correlation with % *Themeda* cover (P = 0.037)
AVERAGE COUNTS: Positive correlation with % grass cover (P = 0.024)

- 'Better managed' habitats are generally associated with more grass, particularly palatable species like *Themeda*. Suggests link between gamebirds & 'better managed' habitats… (although higher burning frequencies may lead to an increase in grass cover and this may not be beneficial for overall biodiversity – thus, this needs more work).

- Landowner attitudes towards gamebirds: interviews done with 20 landowners: Preliminary results:
    - 22% attempted to estimate the number of birds on their property, the rest know nothing about their gamebird populations
    - 17% hunt the birds themselves on a seasonal basis
    - An additional 28% allow others to hunt or hunt themselves, but very occasionally
    - 89% valued the birds for AESTHETIC reasons
    - Only 39% valued the birds for RECREATIONAL hunting purposes
    - None valued them because of their potential commercial value (although 2 (11%) mentioned they were interested in exploring this option)
    - None currently actively manage the veld for the birds
    - 94% would manage for the birds, if the information was available…. When asked 'why':
        - 83% said 'because I like to look at them' – or something to that effect ('add life to the farm', conservation objectives, etc.)
        - 11% said 'to shoot more'
    - Veld management strategies:
        - Burning: 50% burn every 5-7 yrs; 50% do NOT burn

        - Grazing: 58% use renosterveld for grazing; 17% graze very seldom; 25% do not graze renosterveld at all
        - Grazing days: vary from 3 weeks – 6 months per annum; between 200-600 ewes or 20-120 cows

- <u>Other important outcomes:</u>
    - Renosterveld seen as harboring caracal: thus, managed to reduce thick cover, where caracal hide.
    - Thistles are one of the biggest management-challenges for farmers owning renosterveld (some are afraid to burn because of the invasion of thistles post-fire).
    - Getting permits to burn is more and more difficult for farmers, thus old, moribund veld is often left unburned.
    - Many farmers would like to conserve, but lack funding for fencing.
    - Farmers are desperate for KNOWLEDGE: management regimes (burning particularly) & farm-specific information (e.g. rare plants, veld types, etc.).

- OTHER ISSUES THAT NEED TO BE ADDRESSED:
    - Are gamebird numbers high enough & stable enough to sustain commercial shooting?
    - What are the optimal off-take levels?
    - What influences breeding success of Cape & Greywing Francolin in renosterveld fragments?
    - How do gamebirds use the habitats available to them (transformed & untransformed) for foraging – i.e. how dependent are they on renosterveld fragments?
    - How can habitats be managed in a way that is beneficial to gamebirds, livestock & ecosystem integrity (biodiversity)?
- PRELIMINARY CONCLUSIONS
    - Link between gamebirds & veld management: possibility that birds are associated with grassier fragments and therefore 'better managed' habitats.
    - Currently minimal commercial use of Cape & Greywing Francolin
    - Numbers suggest too few birds to hunt on a large commercial scale
    - Gamebirds ARE valued by farmers, mostly for aesthetic / sentimental reasons
    - Enormous variation in management strategies & therefore, incentives…. Gamebirds CAN be useful incentives for improved habitat management in *Critically Endangered* renosterveld!

Discussion / suggestions relating to all presentations:

- Bob Winter: finds hunting legislation easily accessible and understandable. Others agreed.
- Hunting licenses: how to motivate for return of data and are these data really useful?
- Make the database private, through an affiliation and partnership with CapeNature?
- Data collected on dead birds not useful – doesn't show anything about populations… therefore, why send these data in?

Specific issues discussed:

1. Commercial Wingshooting: is it viable in the Western Cape

- Use Overberg as a model for sustainable shooting, data collecting, etc. and test this – later can use as a blueprint for other areas (e.g. Swartland)
- Value of individual bird is minimal, compared with value of the whole shoot
- For sustainable commercial shooting: one shoot per parcel of land per year; aim to shoot no more than $^1/_3$ covey (probably less)
- Viability to shoot birds commercially: 'smiles per minute' – need 60 birds in the air per day (20 per bag per day) – see Rob Little's PhD thesis and related papers.

- Always a natural decline in gamebird counts through winter (April: peak season for numbers, lowest in July): density-dependent pressure system… competing for mating opportunities (birds pushed out and these starve or are predated). Coveys shot breed earlier, as the density-dependent effect is removed.
- Commercially in the Western Cape: needs to be a mixed bag, targeting waterfowl (Egyptian Geese, Spurwing) and Guineafowl. Worth trying this cocktail. Promote quality vs. quantity. It is not known whether or not this model works.

2. Getting the balance right between commercial and recreational wingshooting:

- Some landowners have difficulty separating wingshooters and field trialers – bad experience with the first may make them negative towards other approaching them for hunting on their land.
- Falconers and field trialers: minimal impact on birds, therefore can coexist with commercial wingshooting. These groups are most concerned with the well-being of the birds, as they are most dependent on them. Therefore, these groups are essential to include in the model.

3. Community shoots:

- Three main community shoots on francolin.
- Only about R20 000 profit from birds shot at these shoots
- Better to promote these shoots on Guineafowl only
- Reputational problem mostly – the biggest issue is with the reputation the 'bad apples' give to the whole sport of gamebird utilization. Where farms have been overshot in the past, farmers want nothing to do with wingshooters / dog handlers in the future, making the sustainability of these sports precarious.
- Need to educate and create awareness - get involved with shoots and promote better management of shoots (e.g. captain of the team issues cards – red, green, etc.). Community shoots on Francolin need to be managed better if they are to continue and be supported by the wingshooting community. If this does not happen, then we suggest having the shoots on Guineafowl only,

4. Artificial manipulation of bird populations:

- As soon as exotic species are introduced and management for these becomes a priority, focus is taken off indigenous gamebirds, to their detriment.
- Captive breeding of indigenous birds: very difficult to breed – very wild and very nervous in captivity.
- Captive-bred birds = poor quality (compete with wild stock, loose brooding instincts, no predator vigilance)

5. Hunting seasons:

- Can only standardize if done according to the shortest, most compact season. Otherwise, this is not at all viable (different provinces = different rainfall = different breeding seasons, etc.).
- Hunting licenses: financial control: very difficult
- Option of replacing seasonal licenses with day licenses?
- Cape Hunt: planning to buy licenses in bulk and selling to all members, at the insistence that they hand in their reports.
- What about shooters outside of Cape Hunt? Make available over the internet and at more local sites (e.g. post office, coops, etc.).

6. The way forward:

- Start with the Overberg: use as a model… to find the best model for sustainable wingshooting, on any scale (commercial, recreational, community shoots).
- For this, need to start a group based in the Overberg only
- Possibility of linking up with OICG? Working through district municipality?

- Generally agreed that municipality too far-removed from these issues – need to get a more focused group together
- Start a group as a sub-group of the Overberg Renosterveld Forum…. Which is proposed to be formed in late September at the launch of the Renosterveld Management & Conservation Project (a three-year research project focusing on finding optimal ways to manage renosterveld for both biodiversity and agricultural opportunities). This launch has been postponed until 2008, but the project has started.
- People contributing to the formation of this group were not decided, therefore please let us know if you are keen to volunteer!

APPENDIX 7 SUMMARY REPORT FOR FARMERS, SHOWING DATA COLLECTED ON THEIR RESPECTIVE FARMS.

Table showing raw data from gamebird counts for each farm. Your farm is highlighted in yellow. The averages, maximum and minimum counts have been included below so that you can compare your farms with the averages. The % Rooigras (*Themeda triandra*), grass & shrub cover and vegetation height recorded in the vegetation transects have been included for your interest. *Birds per minute* = Abundance Index = Number of birds found divided by the time spent searching. Some management recommendations have been included here - feel free to question these.

Farm Name	Transect	Date	Searching time (mins)	Number of Greywing	Greywing: birds / min	Number of Capes	Capes: birds / min	% Rooigras	% grass cover	% shrub cover	Veg height	Management recommendations
ADK	1	05.04.07	80	0	0.000	0	0.000	3.0	39	37	210	Area has been overgrazed in the past. Fence off adequately and rest the veld for a long time.
ADK	2	13.05.07	147	2	0.014	2	0.014					
ADK	3	17.07.07	95	0	0.000	1	0.011					
BK	1	10.04.07	122	82	0.672	7	0.057	2.0	50	34	164	Veld appears in excellent condition. Control thistles with appropriate herbicide - not with burning, as this encourages thistles (which thrive with disturbance).
BK	2	14.06.07	129	51	0.395	14	0.109					
BK	3	05.07.07	142	29	0.204	2	0.014					
CV	1	21.04.07	162	28	0.173	51	0.315	2.8	53	32	212	Veld appears in excellent condition. Move rubbish dump out of watercourse and away from the natural veld, as this is not contributing to the health of the system.
CV	2	06.06.07	121	23	0.190	25	0.207					
CV	3	19.07.07	156	4	0.026	26	0.167					
CK	1	05.05.07	129	22	0.171	2	0.016	0.0	28	36	210	Fence off all fragments and rest the veld. The veld is overgrazed and has not had the time to recover from this - it needs a long period of rest.
CK	2	08.06.07	111	0	0.000	0	0.000					
CK	3	21.07.07	109	0	0.000	0	0.000					
FF1	1	27.03.07	49	0	0.000	0	0.000	0.4	49	20	154	Veld is beautiful, but thistles need to be controlled. Difficult to explain absence of birds here - probably just need time to recolonize from adjacent areas.
FF1	2	08.05.07	82	0	0.000	0	0.000					
FF1	3	30.06.07	61	0	0.000	0	0.000					
FF2	1	28.03.07	88	1	0.011	13	0.148	5.3	48	36	278	Area probably needs to burn, but otherwise in excellent condition.
FF2	2	08.05.07	72	6	0.083	12	0.167					
FF2	3	30.06.07	117	0	0.000	12	0.103					
FF3	1	15.04.07	121	15	0.124	1	0.008	0.9	60	32	200	Veld in excellent condition. Carry on with current management - may need to burn in a few years (particularly on the eastern end of valley).
FF3	2	27.05.07	115	2	0.017	2	0.017					
FF3	3	10.07.07	166	0	0.000	3	0.018					
FTK	1	08.04.07	112	17	0.152	15	0.134	6.1	49	32	264	Veld grassy, but lacks diversity (particularly bulbs): could do with some rest - fence
FTK	2	07.06.07	177	10	0.056	2	0.011					

FTK	3	10.08.07	109	0	0.000	6	0.055					adequately to prevent livestock access at critical times (e.g. Spring) to promote grasses and bulbs.
GRS	1	25.04.07	167	7	0.042	6	0.036	4.1	41	45	344	Veld in good condition. May require a burn in the next few years.
GRS	2	01.05.07	136	2	0.015	3	0.022					
GRS	3	01.05.07	136	6	0.044	3	0.022					
J/V	1	18.04.07	156	25	0.160	32	0.205	8.1	65	19	264	Veld overall in good condition. Parts may require a burn in the next few years. Control livestock access with fencing - particularly in Spring.
J/V	2	12.05.07	163	10	0.061	16	0.098					
J/V	3	13.07.07	183	7	0.038	41	0.224					
KR	1	06.04.07	117	8	0.068	0	0.000	1.7	53	33	221	Veld in good condition. Remove small cluster of alien trees (Pines / Hakea) before they become seriously invasive. Continue with current management of minimal grazing - may require a burn in the near-future.
KR	2	27.06.07	107	2	0.019	21	0.196					
KR	3	26.07.07	84	0	0.000	7	0.083					
KBK	1	24.04.07	130	4	0.031	13	0.100	0.0	41	44	277	Veld homogenous because it is old. Veld may have been overgrazed in the past. Veld should burn and then be rested for at least 2 years before grazing is permitted.
KBK	2	01.06.07	118	2	0.017	8	0.068					
KBK	3	08.08.07	114	0	0.000	4	0.035					
MT	1	18.04.07	129	0	0.000	31	0.240	1.5	63	27	265	Veld is in excellent condition - continue to rest, with minimal grazing.
MT	2	06.06.07	140	4	0.029	38	0.271					
MT	3	19.07.07	164	13	0.079	15	0.091					
MK1	1	29.03.07	109	13	0.119	0	0.000	2.7	45	39	206	Veld is in excellent condition (lots of Rooigras!) - continue to rest with minimal grazing.
MK1	2	15.05.07	118	23	0.195	7	0.059					
MK1	3	11.07.07	116	0	0.000	0	0.000					
MK2	1	30.04.07	128	5	0.039	8	0.063	0.6	51	35	296	Veld is also in excellent condition - continue with minimal grazing.
MK2	2	28.05.07	90	15	0.167	11	0.122					
MK2	3	11.07.07	137	4	0.029	9	0.066					
NS	1	17.04.07	142	0	0.000	2	0.014	0.0	12	63	350	Veld on edges has been overgrazed in the past, but fencing, burning and resting will hopefully restore this veld. Further from the edge, it is in good condition and very diverse.
NS	2	30.05.07	142	3	0.021	5	0.035					
NS	3	15.07.07	134	1	0.007	0	0.000					
PK	1	02.05.07	142	0	0.000	0	0.000	0.0	32	51	323	Veld is very diverse and in good condition overall. May require a burn in the not too distant future.
PK	2	03.06.07	110	8	0.073	1	0.009					
PK	3	25.07.07	111	0	0.000	0	0.000					

PH	1	04.05.07	165	11	0.067	18	0.109	0.0	20	45	390	Continue as you are - Stewardship site with good burn plans and no livestock grazing.
PH	2	07.06.07	141	2	0.014	15	0.106					
PH	3	22.07.07	178	8	0.045	20	0.112					
RV	1	19.05.07	122	0	0.000	4	0.033	0.0	37	45	223	Veld is quite diverse, but old and requires a burn to rejuvinate the plant diversity. Will need to be adequately fenced after burn to allow veld to rest.
RV	2	28.06.07	119	0	0.000	6	0.050					
RV	3	28.07.07	107	8	0.075	4	0.037					
VDK	1	02.04.07	91	10	0.110	9	0.099	1.1	44	37	249	Veld is in fairly good condition, but requires a burn, followed by sufficient rest (2 years) and mimimal grazing to restore the veld to it's natural, diverse state.
VDK	2	10.05.07	146	10	0.068	13	0.089					
VDK	3	07.07.07	144	0	0.000	1	0.007					
AVERAGE			**125**	**8.38**	**0.07**	**9.45**	**0.07**	**2.02**	**44.00**	**37.10**	**255**	
Maximum			**183**	**82**	**0.67**	**51.00**	**0.31**	**8.10**	**65.00**	**63.00**	**390**	
Minimum			**49**	**0**	**0**	**0**	**0**	**0**	**12**	**19**	**154**	