

## Guide

This website will eventually contain over 300 field notes on a variety of features and natural processes in different locations within the Study Area. For ease of navigation in the site, the field notes have been installed in twenty-seven chapters. In every chapter the field notes were grouped in sections according to certain subjects (The site is been continuously populated, and field notes are added from time to time).

The first six chapters (A to F) are introductory. The order of the next twelve chapters (G to R) is, generally, from the west (Cape Agulhas) to the east (Cape Infanta). The next chapter (S) is about the area (Rûens) north of the Hard Dunes. The next three chapters (T to V) are about the coastal area and the adjacent sea. The next chapter (W) contains discussions on various subjects, followed by two chapters of appendices, which contain notes (some of which are archival) about the fauna and flora (X) and about other subjects (Y) of the Study Area. The last chapter (Z) contains bibliography lists and information sources.

When readers click the 'Table of Contents' button, only the names of the chapters are shown. The following is a breakdown of the chapters into sections and into individual field notes, which will help readers to find the subject they want to read about (only highlighted field notes can be accessed):

### A. INTRODUCTION

1. Geography
2. Geology
3. Morphology
4. Hydrology
5. Archaeology

### B. NATURE RESERVES

1. Overview
2. Public nature reserves
  - a. De Mond Nature Reserve
  - b. Soetendals Vlei Nature Reserve
  - c. Waenhuiskrans Nature Reserve
  - d. Heuninberg Nature Reserve
  - e. De Hoop Nature Reserve and Marine Protected Area
3. Private nature reserves
  - a. Andrewsfield Nature Reserve
  - b. Heunings River Nature Reserve
  - c. Ancient Milkwood Tree (National monument)
  - d. Vogel Rivier Nature Reserve
  - e. Haarwegskloof Renosterveld Reserve
  - f. Hasekraal Nature Reserve
  - g. San Sebastian Nature Reserve
4. Denel Overberg Test Range
5. Bredasdorp Shipwreck Museum

### C. GEOLOGY

1. Overview
2. Table Mountain Group
  - a. Overview
  - b. Agulhas Outcrops
  - c. Bredasdorp Outcrops
    1. Heuninberg Mountain
    2. Zandfontein Quarries
    3. Muurkraal Farm
  - d. Arniston Outcrops
    1. Meulvlei Ridge

2. Srtuis Point
  - e. Potberg Outcrops
    1. Potberg Mountain
    2. Cape Infanta
    3. Potberg Estates
  3. Bokkeveld Group (see Chapter S)
  4. Quartz veins (see Chapter S)
  5. Clays (see Chapter S)
  6. Enon Formation
    - a. Soutpansvlakte Basin
    - b. Salt River and De Hoop Vlei Gorges
    - c. Deposits
    - d. Subsurface geology
    - e. Clasts
  7. Gravel terraces
    - a. North of the Hard Dunes
    - b. Along the Breede River
    - c. Other gravel terraces
  8. Grahamstown Formation (see Chapter S)
  9. Bredasdorp Group
    - a. Overview
    - b. De Hoop Formation
    - c. Wankoe Formation
    - d. Klein Brak Formation
    - e. Waenhuiskrans Formation
      1. Overview
      2. Consolidated ridges
      3. Semi-consolidated ridges
      4. Calcrete-capped dunes
      5. Klipfontein Depression
    - f. Strandveld Formation
- D. DURICRUSTS
1. Pedocretes - Overview
  2. Calcrete - Overview
    - a. Calcrete on the Bokkeveld Formations
    - b. Calcrete on the Enon Formation
    - c. Calcrete on the Bredasdorp Group Formations
    - d. Calcrete on the Bredasdorp Plain
    - e. Calcrete on the West Hard Dunes
    - f. Calcrete in the Ou Werf Valley
    - g. Calcrete on the East Hard Dunes
    - h. Calcrete around roots
    - i. Calcrete as conglomerate cement
    - j. Calcrete dissolution features
    - k. Calcrete spatial distribution
  3. Silcrete and ferricrete – Overview
    - a. Pedogenic silcretes – A. Hilltops – on soil and sediment
    - b. Pedogenic silcretes – B. Hilltops – in rocks
    - c. Pedogenic silcretes – C. Shoulders
    - d. Pedogenic silcretes – D. Slopes
    - e. Hilltop silcretes spatial distribution
    - f. Non pedogenic silcretes – A. Ground water
    - g. Non pedogenic silcretes – B. Drainage line and riverine
    - h. Non pedogenic silcretes – C. Lacustrine and pan
    - i. Pedogenic and non-pedogenic ferricretes
    - j. Napier silcretes and ferricretes

- k. Elim silcretes and ferricretes
- l. Breede River gravel terraces ferricrete
- m. Ferricrete spatial distribution
- n. Ferruginised silcretes
- o. Silicified and ferruginised shales and sandstones
- p. Fault-zone shales and quartz
- q. Use of silcretes in the Stone Age

#### E. KARST LANDFORMS

1. Overview
2. Dry valleys
3. Doline provinces
  - a. Northwest province
  - b. Southwest province
  - c. Southeast province
  - d. Northeast province
4. Caves and overhangs

#### F. TECTONICS

1. Overview
2. Morpho-tectonic evidence

#### G. CAPE AGULHAS AND STRUIS BAY

1. Geography
2. Morphology
3. Geology
4. Archaeology - see Chapter U (fish traps)

#### H. BREDASDORP PLAIN

1. Geography
2. Morphology
3. Geology
4. Hydrology
  - a. Rivers and lakes
  - b. Floods
  - c. Flood control

#### I. HEUNINGNES AND KARS RIVERS

1. Geography
2. Heuningnes River
3. Heuningnes River Estuary
4. Kars River
5. Kars River Gorge
  - a. Morphology
  - b. Geology
  - c. Tectonics
  - d. Archaeology

#### J. WEST HARD DUNES

1. The Outer Hard Dunes
  - a. Morphology
  - b. Geology
  - c. Karst landforms

2. The Inner Hard Dunes
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  - b. Geology
  - c. Karst landforms
  
- K. WEST VALLEYS
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  4. Rietfontein Valley
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    - b. Morphology
    - c. Geology – Overview
    - d. Geology – Calcrete
    - e. Geology – Fossils
    - f. Geology – Stone heaps
    - g. Hydrology
    - h. Archaeology – Ou Werf
  7. Hooge Krans Valley
  8. Patryze Valley
  
- L. SALT AND POTBERG RIVERS
  1. Geography
  2. Geology and tectonics
  3. Morphology
    - a. Salt River
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      1. Upper Potbreg River Valley
  4. Hydrology
  
- M. SALT RIVER GORGE
  1. Overview
  2. Roads and causeways
  3. Geology
  4. Morphology
    - a. Overview
    - b. Cliffs
    - c. Koleskloof
    - d. Ravines
    - e. The Island
  5. Tectonics
  6. Hydrology
    - a. Salt River Marsh
    - b. Fountains
  7. Archaeology
  
- N. DE HOOP VLEI GORGE
  1. Overview
  2. Morphology
  3. Bathymetry
  4. Die Mond
  5. Geology
  6. Evidence of tectonics

7. Karst landforms
    - a. Overview
    - b. Guano Cave
  8. De Hoop Vlei
    - a. Hydrology – Water level -19<sup>th</sup> century
    - b. Hydrology - Water level – 1900 to 1960
    - c. Hydrology – Water level – 1960 - 2020
    - d. Fountains
    - e. Disappearing vlei
  9. Archaeology
    - a. Dams
    - b. Ruins
    - c. Roads and stonewalls
- O. EAST HARD DUNES
1. Geography
  2. Morphology
  3. Geology
  4. Karst landforms
- P. EAST VALLEYS
1. Red sand valleys
  2. Vleis
  3. Karst landforms
- Q. POTBERG
1. Overview
  2. Geology
  3. Morphology
    - a. Buffelsfontein Valley
    - b. Other features
  4. Archaeology - salt mines
- R. CAPE INFANTA
1. Geography
  2. Morphology
  3. Geology
  4. Breede River Estuary
- S. SHALE HILLS
1. Overview
  2. Geology
    - a. Overview
    - b. Bokkeveld Group
      1. Overview
      2. Shale and sandstone formations
      3. Western sandstone lenses
      4. Eastern sandstone lenses
      5. Shales with iron and manganese
    - c. Quartz veins
    - d. Grahamstown Formation
      1. Hilltop silcretes spatial distribution
      2. Ferricretes spatial distribution
      3. The Silcretes of Sonderkoskop
      4. Rooikop – Silicification, ferrugination and mineralisation



- e. Clay
  - 3. Morphology
    - a. African Surfaces
    - b. Post African Surfaces erosion
    - c. 'Separating' Valley
    - d. Drainage patterns
  - 4. Tectonics
    - a. Overview
    - b. Compression
    - c. Faults
  - 5. Mines
    - a. Sonderkoskop
    - b. Grootkop and Hill 288
    - c. Hill 254
    - d. Verfheuwel
    - e. Witdam
- T. DUNE FIELDS
- 1. Overview
  - 2. Struis Bay to Arniston
  - 3. Overberg Test Range
  - 4. De Hoop Nature Reserve
  - 5. Dune geometry
  - 6. Dune stabilisation
  - 7. Buried ridges
- U. SHORES
- 1. Geography
  - 2. Geology
  - 3. Agulhas to Arniston
  - 4. Heuningnes River Estuary
  - 5. Otter Bay and Struis Point
  - 6. Arniston caves
  - 7. Arniston
  - 8. Arniston to De Hoop Nature Reserve
  - 9. De Hoop Nature Reserve sandy shores
  - 10. De Hoop Nature Reserve rocky shores
  - 11. Shore and beach features and processes
  - 12. Archaeology
    - a. Fish traps
      - 1. Overview
      - 2. Suiderstrand
      - 3. Rasperpunt
      - 4. Cape Agulhas
      - 5. Struis Bay
      - 6. Struis Point
      - 7. Ryspunt
      - 8. Skipskop
      - 9. Breede River
    - b. Stone Age caves
- V. OFFSHORE
- 1. Geology
  - 2. Bathymetry
  - 3. Sea-level changes
  - 4. Currents, tides and upwelling

5. Archaeology - Shipwrecks

W. DISCUSSIONS

Geology maps discrepancies  
Palaeo Agulhas Plain  
Offshore river channels  
Enon Formation  
Bredasdorp Group Formations  
    a. De Hoop Vlei  
    b. Wankoe  
    c. Klein Brak  
    d. Waenhuiskrans  
    e. Strandveld  
Kars River Gorge  
Salt River Gorge  
De Hoop Vlei Gorge  
Drainage of the De Hoop Vlei  
West Valleys  
Fossils in the Ou Werf Valley  
Karst landforms  
Dry valleys and red sand valleys  
Erosional African Surfaces  
Morpho-tectonic lineaments  
Hard Dune crest morphology

X. APPENDICES – FAUNA and FLORA

a. By the author

1. Salt River Marsh vegetation
2. Tree - rock associations
3. Ancient milkwood trees
4. Bushfires
  - a. West of De Hoop Vlei
  - b. East of De Hoop Vlei

b. By others

1. Ramsar Convention (archival)
2. De Hoop Nature Reserve (a) (archival)
3. De Hoop Nature Reserve (b) (archival)
4. Fynbos habitat of De Hoop Vlei (archival)
5. Limestone fynbos (archival)
6. Renosterveld vegetation
  - a. Introduction
7. De Hoop bats (archival)
8. Cape Horseshoe Bat (archival)
9. Potberg vultures (archival, a)
10. Potberg vultures (archival, b)

Y. APPENDICES – OTHER SUBJECTS

a. By the author

1. Salt River Marsh - Floods and droughts
2. Skipskop fishing community

b. By others

1. De Hoop Vlei – Floods and droughts
2. The People of De Hoop Nature Reserve
3. Catastrophic earthquakes 70,000 years ago



Z. BIBLIOGRAPHY (partial lists)

1. Geography
2. Morphology
3. Geology
4. Hydrology
5. Archaeology
6. Fauna and flora