

Guide

This website will eventually contain over 300 field notes as well as over 50 desk notes, discussions and appendices on a variety of features and natural processes in different locations within the Study Area. For ease of navigation in the site, the notes have been installed in twenty-seven chapters. In every chapter the notes were grouped in sections according to certain subjects (the site is continuously populated, and 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 'Chapters' button, a list of all the chapters on the website will come up. Click on a Chapter to find the subject you want to read about. The following is a breakdown of the chapters into sections and into individual notes (only highlighted 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. Struis 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 also Chapter D)
 - a. Silcretes and ferricretes
 - b. Hilltop silcretes
 - c. Hilltop silcretes spatial distribution
 9. Bredasdorp Group
 - a. Overview
 - b. De Hoop Formation
 - c. Wankoe Formation
 - d. Klein Brak Formation
 - e. Waenhuiskrans Formation
 1. Overview
 2. Ridges and features
 - a. Cape Agulhas
 - b. Struis Bay to Arniston
 - c. Arniston
 - d. OTR
 - e. De Hoop Nature Reserve
 3. Calcrete-capped dunes
 4. Klipfontein Depression
 - f. Strandveld Formation
 10. Soils
- D. DURICRUSTS
1. Pedocretes - Overview
 2. Calcretes - Overview
 - a. Calcrete on the Bokkeveld Formations
 - b. Calcrete on the Enon Formation
 - c. Calcrete on the Bredasdorp Group Formations
 1. Overview
 2. Wankoe Formation 'Hard Dunes'
 3. Wankoe Formation 'Soft Dunes'
 4. Waenhuiskrans Formation
 - d. Calcrete on the Bredasdorp Plain
 - e. Calcrete in the Ou Werf Valley
 - f. Calcrete around roots
 - g. Calcrete as conglomerate cement
 - h. Calcrete dissolution features
 - i. Calcrete spatial distribution
 3. Silcretes and ferricretes – Overview



4. Silcretes
 - a1. Pedogenic silcretes – A1. Hilltops (jointed)
 - a2. Pedogenic silcretes – A2. Hilltops (disintegrated)
 - b. Pedogenic silcretes – B. Hill slopes
 - c. Hilltop silcretes spatial distribution
 - d. Silcretes as Stone Age raw material for tools
 - e. Non pedogenic silcretes – A. Ground water
 - f. Non pedogenic silcretes – B. Drainage-lines and rivers
 - g. Non pedogenic silcretes – C. Lakes and pan
 5. Ferricretes
 - a. Pedogenic and non-pedogenic ferricretes
 - b. Ferruginised silcretes
 - c. Ferruginised shales and sandstones
 - d. Heavily ferruginised shales - hilltops
 - e. Heavily ferruginised shales – hillslopes
 - f. Fault zone ferruginised shales
 - g. Manganese in ferruginised shales
 - h. Ferricrete spatial distribution
 6. Adjacent areas
 - a. Elim silcretes and ferricretes
 - b. Napier silcretes and ferricretes
 - c. Breede River gravel terraces ferricretes
 7. Pedocretes landscape field guides
 - a. Calcretised landscape – a field guide
 - b. Silcretised and ferricretised landscape – a field guide
- E. KARST LANDFORMS
1. Overview
 2. Wankoe Formation - dry valleys
 3. Wankoe Formation - dolines
 - a. Northwest province
 - b. Southwest province
 - c. Southeast province
 - d. Northeast province
 4. Wankoe Formation - caves and overhangs
 5. Wankoe Formation - pinnacles
 6. Waenhuiskrans Formation – caves
 7. Waenhuiskrans Formation - pinnacles
- 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. HEUNINGS AND KARS RIVERS

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

J. WEST HARD DUNES

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

K. WEST VALLEYS

- 1. Overview
- 2. West Renoster Valley
- 3. East Renoster Valley
- 4. Rietfontein Valley
- 5. Matjesfontein Valley
- 6. Ou Werf Valley
 - a. Geology
 - 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
 - b. Potberg River
 - 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. Valleys
 1. Koleskloof
 2. Windhoek Valley
 - d. Ravines
 - e. Pinnacles
 - f. 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 hydrology
 - a. Overview
 - b. Water levels - 19th century
 - c. Water levels - 1900 to 1960
 1. Flash flood of 1957
 - d. Water levels - 1960 to 2020
 1. Floods of 2007 and 2014
 2. Flash flood of May 2021
 - e. Fountains
 - f. Disappearing vlei
 9. Archaeology
 - a. Dams
 - b. Ruins
 - c. Roads, dykes and stone-walls
 10. Fauna and flora
- O. EAST HARD DUNES
1. Geography
 2. Morphology
 3. Geology
 4. Caves
 - a. Karst pinnacles
 - b. Pinnacles – Type A
- P. EAST VALLEYS
1. Red sand valleys
 2. Vleis
 3. Pinnacles – Type B

- Q. POTBERG AREA
1. Overview
 2. Geology
 - a. TMG rocks
 - b. Gravel terraces
 - c. Depressions
 3. Morphology
 - a. Buffelsfontein Valley
 - b. Other features
 4. Archaeology
 - a. Salt mines
- R. CAPE INFANTA
1. Geography
 2. Morphology
 3. Geology
 - a. Cape Infanta to St Sebastian Point
 - b. Infanta Village to Kabeljou Bank
 - c. Breede River Estuary south shore
 4. Tectonics
 5. Breede River
 - a. Estuary
 - b. Offshore canyon
- 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. Ferruginised shales; manganese (See Chapter D)
 - c. Quartz outcrops
 1. Quartz veins
 2. Hilltops and hillslopes
 3. Fault zone
 - d. Grahamstown Formation
 1. Hilltop silcretes spatial distribution (See Chapter D)
 2. Ferricretes spatial distribution
 3. Sonderkoskop - silcretes and ferricretes
 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-Muurkraal
- 6. Archaeology
 - a. Stone-Age tool-making sites

T. COASTAL DUNES

- 1. Overview
 - a. Dune formation and dune types
 - b. Dunes of the Study Area
- 2. Dune sedimentary processes
 - a. Shifting dunes
 - b. Stabilised dunes
 - c. Calcrete-capped dunes
 - d. Calcified dunes ('Hard Dunes')
- 3. Dune stabilisation and conservation
- 4. Struis Bay to Struis Point Dune Strip
- 5. Waenhuiskrans Nature Reserve Dunes
- 6. OTR Dune Strip
- 7. De Hoop Nature Reserve Dune Field

U. SHORES

- 1. Overview – Geography and geology
- 2. Shores of the Study Area
- 3. Rocky shores
- 4. Sandy shores
- 5. Agulhas to Struis Bay Shores
- 6. Struis Bay Shore
- 7. Heunings River Estuary
- 8. Arniston Shores
 - a. Morphology - Overview
 - a1. South Shore
 - a2. Struis Point
 - a3. East Shore
 - a4. North Shore
 - b. Geology – Overview
 - c. Geomorphological features - Overview
 - c1. Karst pinnacles
 - c2. Karst pipes
 - c3. Notches and caves
 - c4. Abrasion tables
 - c5. Dissolution features
- 9. Overberg Test Range Shores
- 10. De Hoop Nature Reserve Shores
- 11. Breede River Mouth Shores
- 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 shelters
 - c. Shell middens

V. OFFSHORE

1. Geology
2. Bathymetry
3. Sea-level changes
4. Currents
5. Archaeology - Shipwrecks

W. DISCUSSIONS

Geology maps discrepancies
Enon Formation
Bredasdorp Group Formations

- a. De Hoop Vlei
- b. Wankoe
- c. Klein Brak
- d. Waenhuiskrans
- e. Strandveld

Hard Dune morphology
Kars River Gorge
Salt River Gorge
De Hoop Vlei Gorge
De Hoop Vlei hydrology
Drainage of De Hoop Vlei
Palaeo Agulhas Plain
Offshore river channels
West Valleys
Fossils in the Ou Werf Valley
Karst landforms
Dry valleys and red sand valleys
Erosional African Surfaces
Morpho-tectonic lineaments

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