

SADC REGIONAL PROGRAMME FOR RHINO CONSERVATION

**MONITORING AFRICAN RHINO
AN AFRSG UPDATE OF "SANDWITH'S" TRAINING
COURSE FOR FIELD RANGERS**

5TH Edition

TRAINEE'S GUIDE

***Training in Rhino Monitoring Techniques
Semester 8 task 4.1-1.3***



**COOPERAZIONE
ITALIANA**

ITALIAN COOPERATION

AID 5064



IUCN
The World Conservation Union



PUBLICATION CREDITS:

Title: Monitoring African Rhino: an AfRSG update of ‘Sandwith’s’ Training Course for Field Rangers (5th Edition). Trainee’s Guide.

Authors: Keryn Adcock & Richard Emslie

Date: July 2003

Special acknowledgements: Page 12

This report is an output from a task of the **SADC Regional Programme for Rhino Conservation**

ABOUT the SADC Regional Programme for Rhino Conservation:

The Programme is funded by the Italian Ministry of Foreign Affairs, Directorate General for Development Cooperation (Project AID 5064).

The Programme is contracted to CESVI and implemented through a regional consortium which comprises:

- The Secretariat of the Southern Africa Development Community (SADC)
- IUCN-ROSA (The World Conservation Union - Regional Office for Southern Africa)
- The IUCN African Rhino Specialist Group
- WWF-SARPO - (World Wide Fund for Nature - Southern Africa Regional Programme Office)
- CESVI (Cooperazione e Sviluppo)

The **Programme goal** is to contribute to maintain viable and well distributed metapopulations of Southern African rhino taxa as flagship species for biodiversity conservation within the SADC region.

The **Programme objective** is to implement a pragmatic regional rhino strategy within the SADC region following the acquisition of sound information on, firstly, the constraints and opportunities for rhino conservation within each range state and secondly, the constraints and opportunities for rhino metapopulation management at the regional level.

DISCLAIMER

The information, opinions and materials presented herewith do not necessarily reflect the official views of any of the organisations involved, including the Italian Ministry of Foreign Affairs, SADC, CESVI, IUCN-ROSA, WWF-SARPO, AfRSG or governments of SADC member countries.

CONTACT DETAILS FOR THE PROGRAMME:

Dr. Rob Brett
SADC Regional Rhino Programme Coordinator
IUCN-ROSA
6 Lanark Road Belgravia PO Box 745 Harare, Zimbabwe
Tel: 263-4-728266 Fax: 263-4-720738
Email: robb@iucnrosa.org.zw

SADC Secretariat
Directorate of Food, Agriculture and Natural Resources
P O Box 0095 Gaborone Botswana

CESVI Zimbabwe Office
9 Northwood Rise, Mt Pleasant, Harare, Zimbabwe
TEL/ FAX: 263-4-882243, 884492, 850898
EMAIL: cesvi@africaonline.co.zw

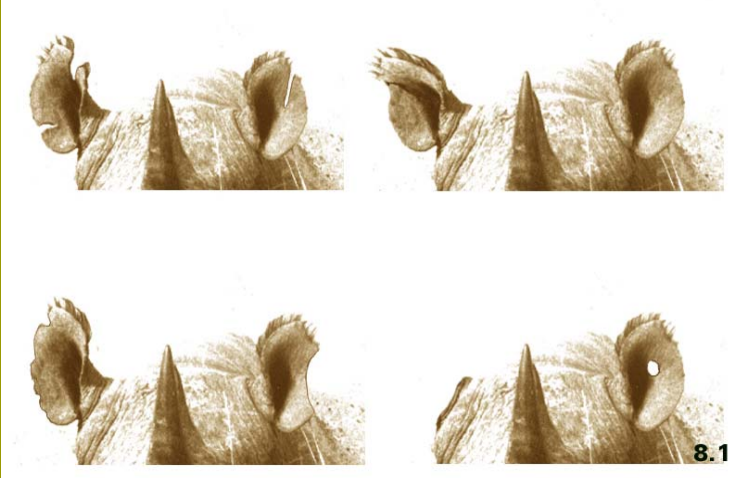
Ministero degli Affari Esteri
Direzione Generale per la Cooperazione allo Sviluppo,
Unità Tecnica Centrale
Viale Contarini (angolo Viale Farnesina)
00194 ROMA ITALY

PROGRAMME WEB SITE:

We invite you to visit our web site : www.rhino-sadc.org

- The development of this booklet was made possible by the primary sponsorship of US Fish and Wildlife's Rhino and Tiger Conservation Fund and secondary sponsorship of the Italian-funded SADC Regional Programme for Rhino Conservation.
- For course details, and to enquire about getting more copies or a .pdf. version of this booklet please contact Richard Emslie at the AfRSG at remslie@kznwildlife.com or +27 (0)33 3434065.
- The compilers would like to acknowledge the input and ideas from many people who helped improve the AfRSG course over the years including Trevor Sandwith, Tony Conway, Billy Howells, Rob Blok, Craig Read, Rusty Hustler, Gus van Dyk and Raj Amin.
- The standardized ageing series are largely based on the pioneering work of Peter Hitchins (black rhino) and Norman Owen-Smith (white rhino).
- The standardized black rhino condition assessment system was jointly developed by H.O. Reuter (Namibia), Keryn Adcock (South Africa), Raoul du Toit and Chris Foggin (Zimbabwe).
- Those wanting to obtain copies of this booklet in another language should please contact Richard Emslie. Please be prepared to find someone who can translate the text.


This booklet belongs to:




Monitoring African Rhino Trainee's Guide

**Part of IUCN SSC AfRSG's 5th Edition of
Sandwith's Training Course for Field Rangers**

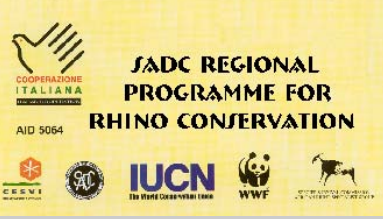
Compilers : Keryn Adcock & Richard Emslie



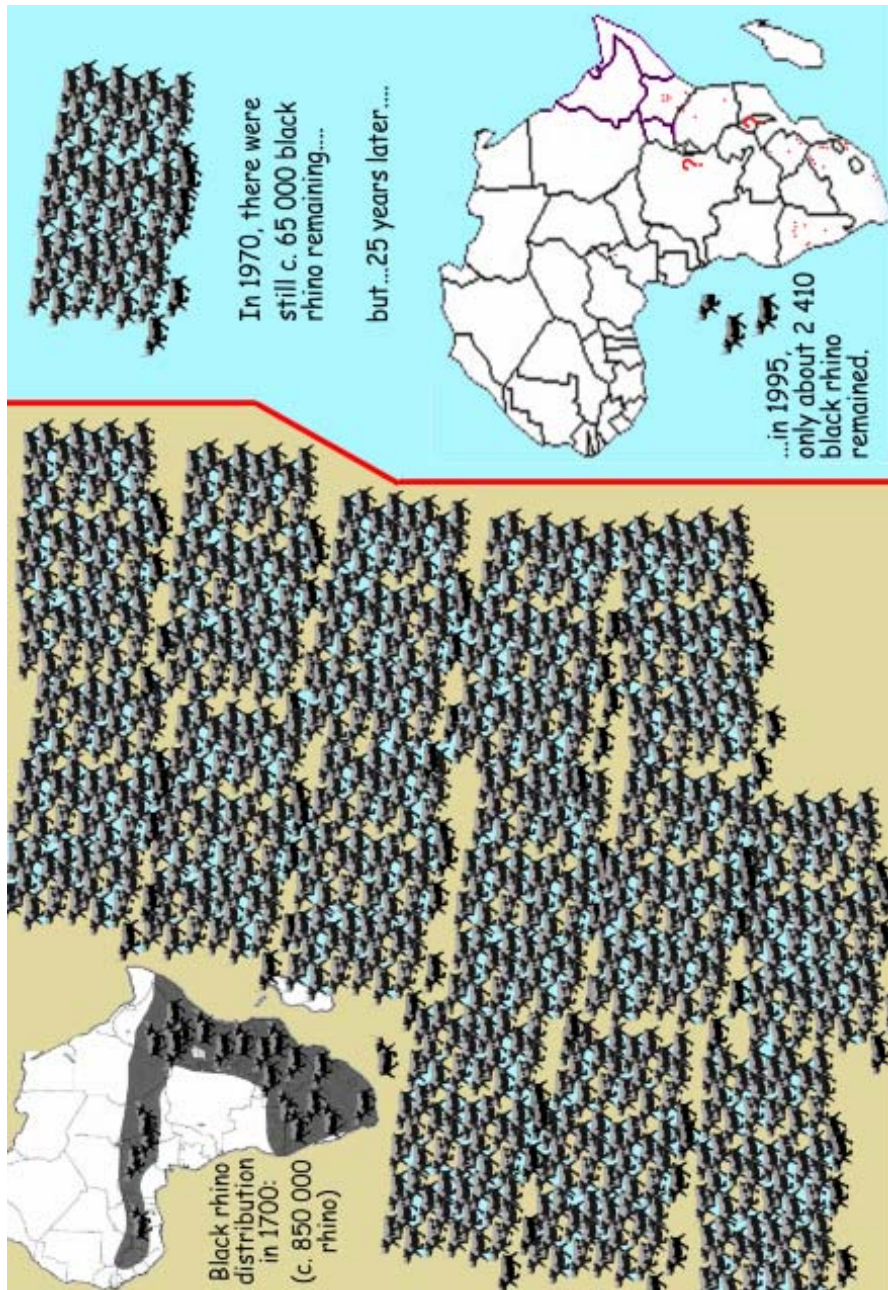
**Rhino and Tiger
Conservation
Fund**



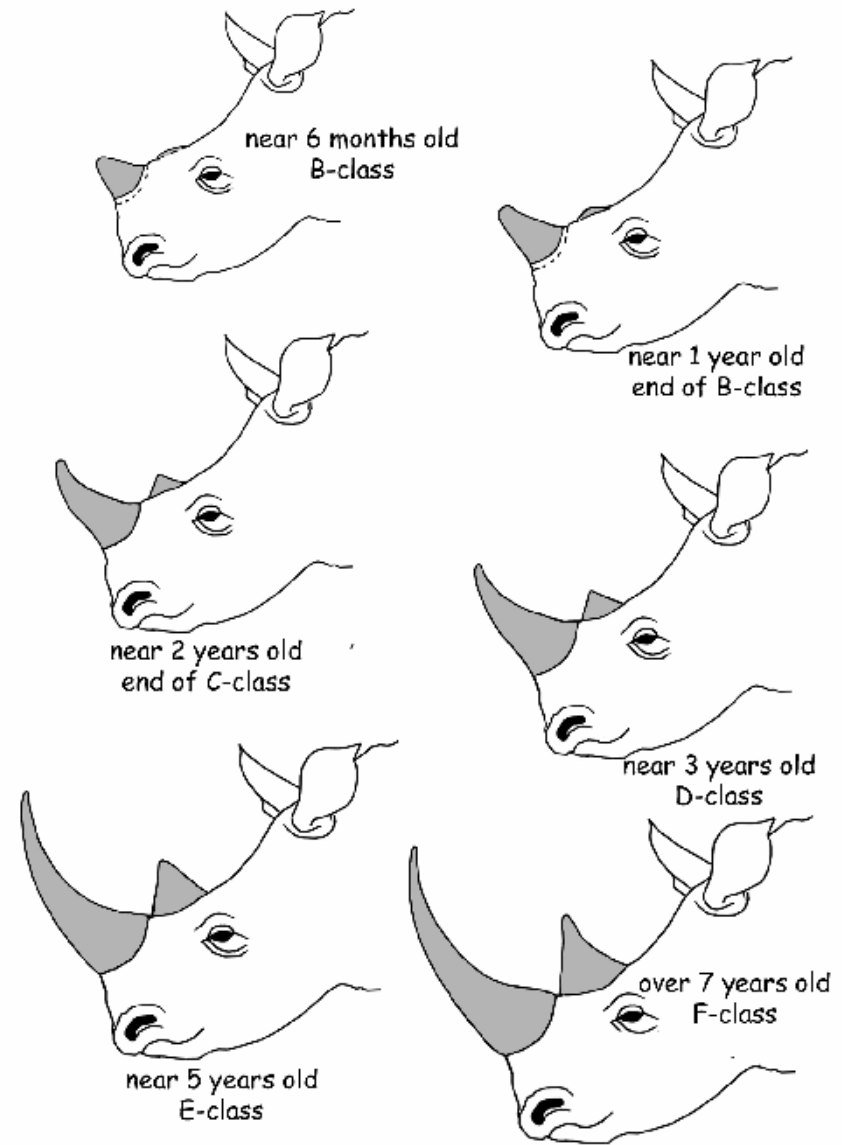
**IUCN SSC
AFRICAN RHINO
SPECIALIST GROUP**



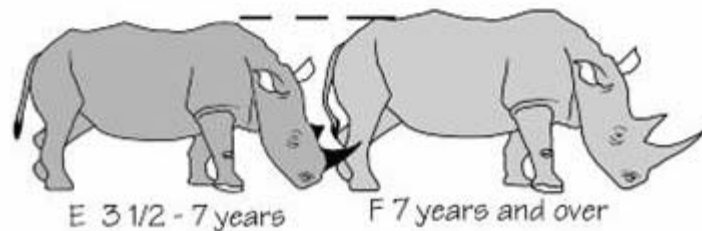
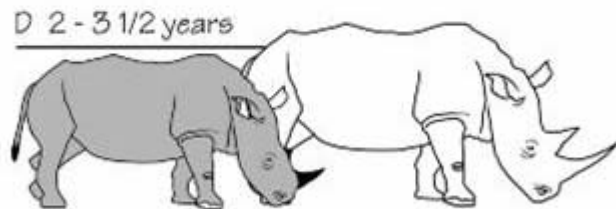
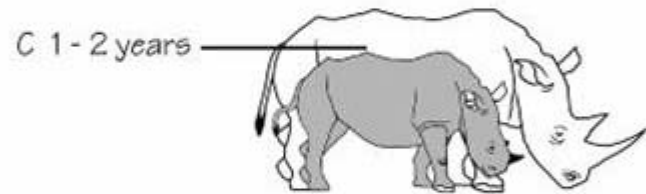
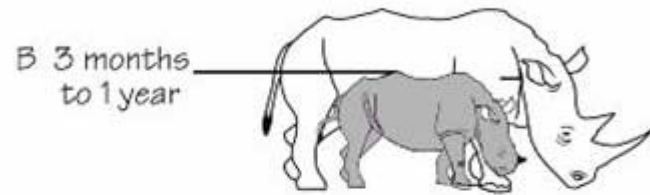
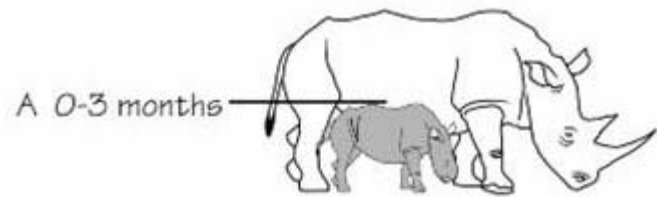
DECLINE IN BLACK RHINO UP TO 1995



Approximate Appearance of Horns in White Rhino From 6 months to Adult



WHITE RHINO AGE CLASSES



INTRODUCTION

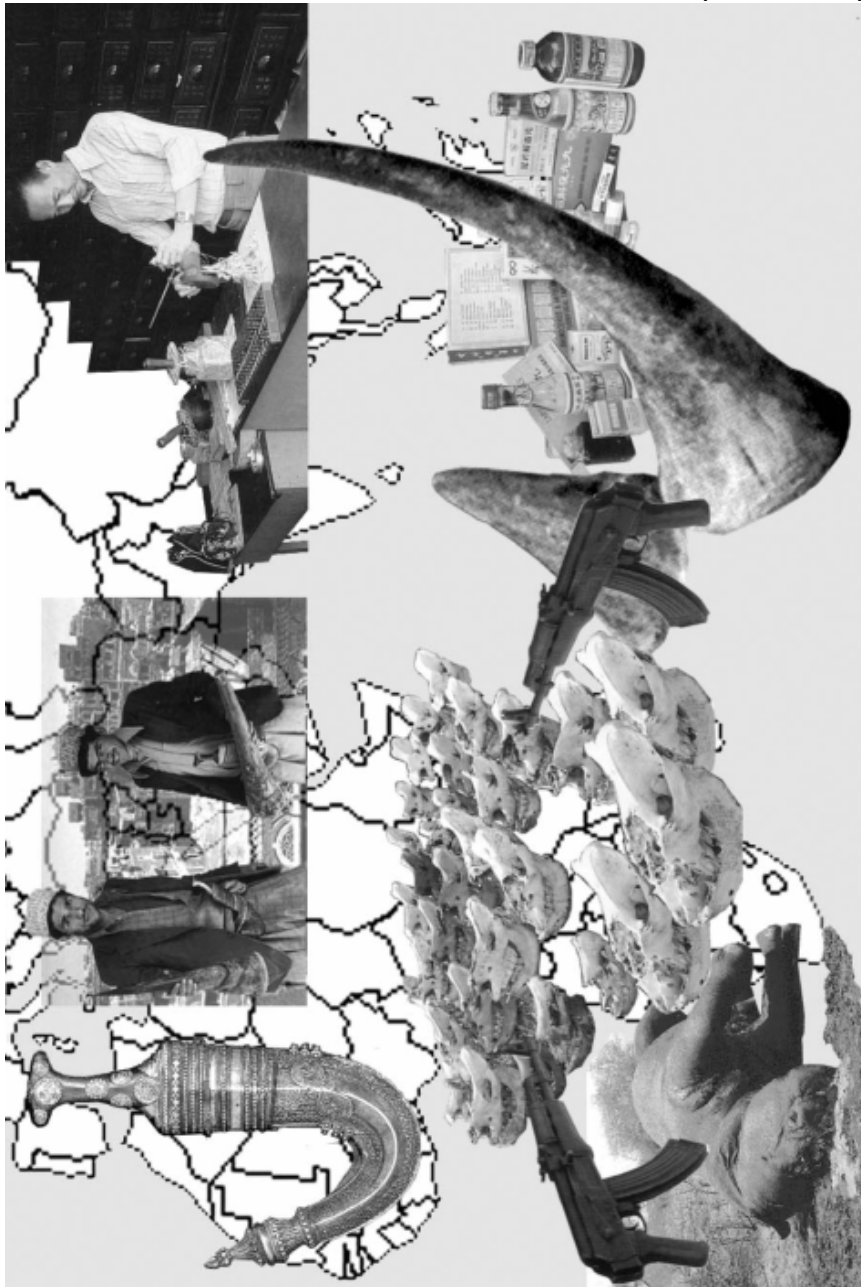
- This guide is for trainees undertaking IUCN's African Rhino Specialist Group's modified "Sandwith" Training Course for Field Rangers in ID rhino monitoring techniques. It highlights the essential techniques of rhino monitoring to provide field rangers with some take-away notes from the course. It also should assist them reach and maintain the required monitoring standard, and in so doing enable them to collect the monitoring data needed to better understand and manage rhino populations for growth.
- While this guide concentrates on black rhino, most of the content is also applicable to white rhino. White rhino ageing material is provided at the back of the booklet.

BACKGROUND TO RHINO CONSERVATION

- Black rhino are listed as *Critically Endangered*. (IUCN Red List)
- Their numbers dropped from around 65,000 in 1970, to only 2,410 in 1995. Only by carefully protecting and managing the remaining black rhino have numbers slowly started to increase, reaching 3,100 by 2001.
- There were only 20+ southern white rhino in 1900; but with protection and translocation to new areas they have increased to number 11,640 in the wild with 700+ in captivity worldwide.
- Poaching has caused northern white rhino numbers to decline from an estimated 2,230 in 1960 to only around 30 in one population in D.R.Congo.
- Africa's rhinos are killed illegally for their horn, which is used in other continents - primarily for dagger handles (Yemen) and Traditional Chinese Medicine (East Asia). *See Poster on next page.*
- There are three other rhino species in Asia - all are rarer than the two African rhino species.
- To prevent rhino disappearing forever it is necessary to protect them from poaching (Defence) and manage them to maintain rapid population growth (Attack). Information on rhino numbers and breeding is required for the latter - We get this by monitoring.
- Most African rhino today are conserved in South Africa, Namibia, Zimbabwe and Kenya, with smaller numbers in other countries. Rhinos are being reintroduced back where they were once wiped-out. Black rhinos have just been reintroduced into Zambia and Botswana.

- Note—Six Class A-F system used for white as well as black

**THE TWO MAIN USES OF RHINO HORN
TRADITIONAL CHINESE MEDICINE AND JAMBIYAS (DAGGERS)**



SEXING RHINO



Female (note vulva)

Male (note flap of skin)

AGEING BLACK RHINO FROM THE SIDE

Practice marking the points
A to D of the female's
front (shoulder) and rear



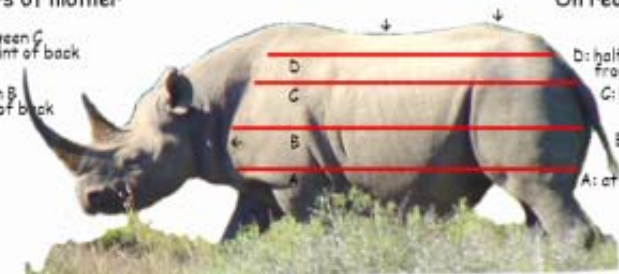
POINTS ON MOTHER DESCRIBING TOP OF CALF AGE CLASSES A TO D

On front-quarters of mother

- D: half way between C and lowest point of back
- C: half way between B and lowest point of back
- B: just above shoulder point
- A: at top of front leg fold

On rear of mother

- D: half way down back from sacral bump
- C: base of tail
- B: bottom of vulva
- A: at the udders



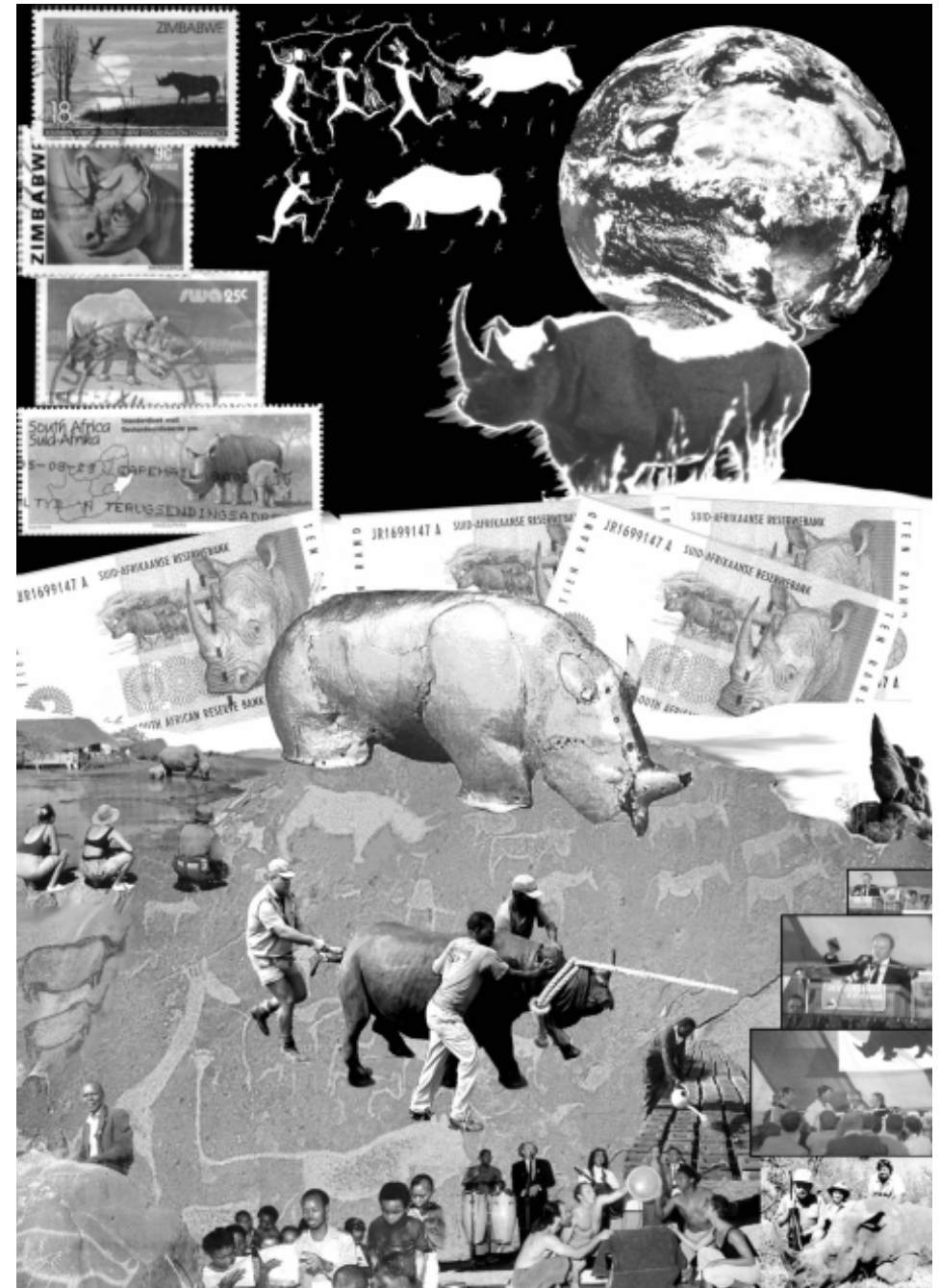


5

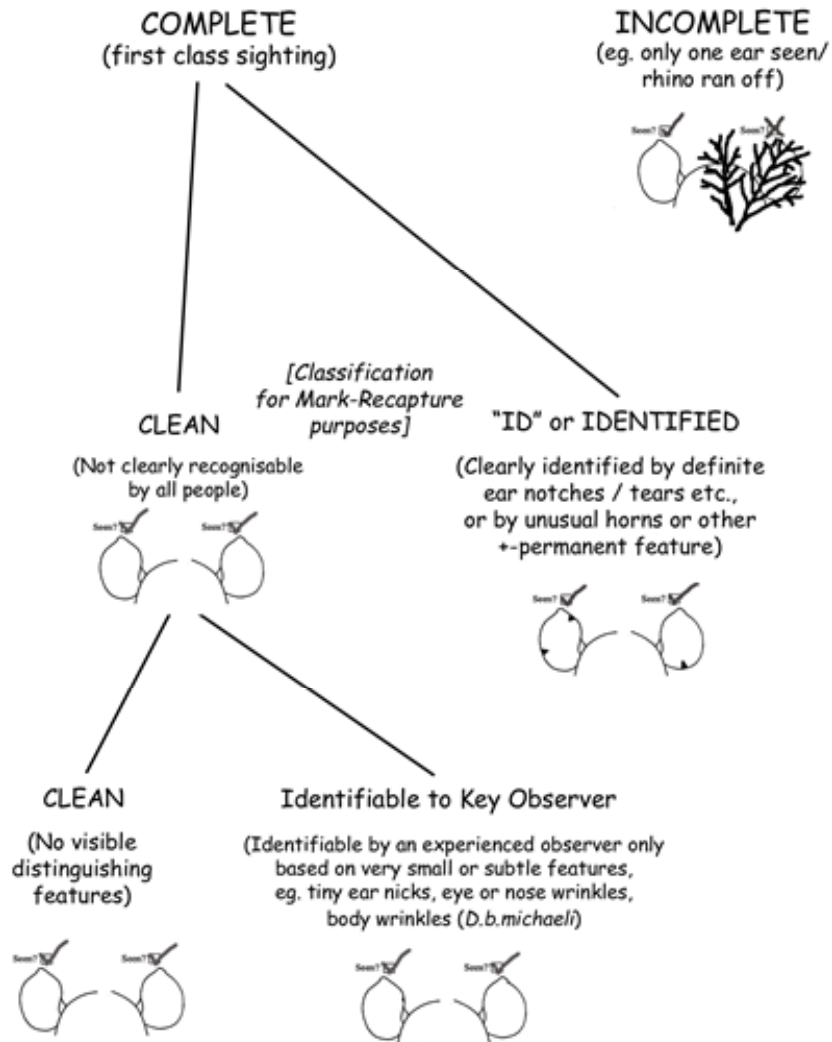
Condition Assessment

Rump, “**sweet spot**”, **shoulder** and **neck** bulging. Area along **spine** broad and well filled out, covering most of the spine. Rhino almost looks inflated like a sausage!

THE CULTURAL, SPIRITUAL AND ECONOMIC VALUE OF RHINO



CLASSIFICATION OF RHINO SIGHTINGS



4

Condition assessment

Rump flat to slightly hollow. **Hip bones** (hip line) rounded off. Filled in (not slightly sunken) along **spine**. **"Sweet spot"** well filled and rounded. **Shoulder** nicely rounded. **Neck** notably still bulging.

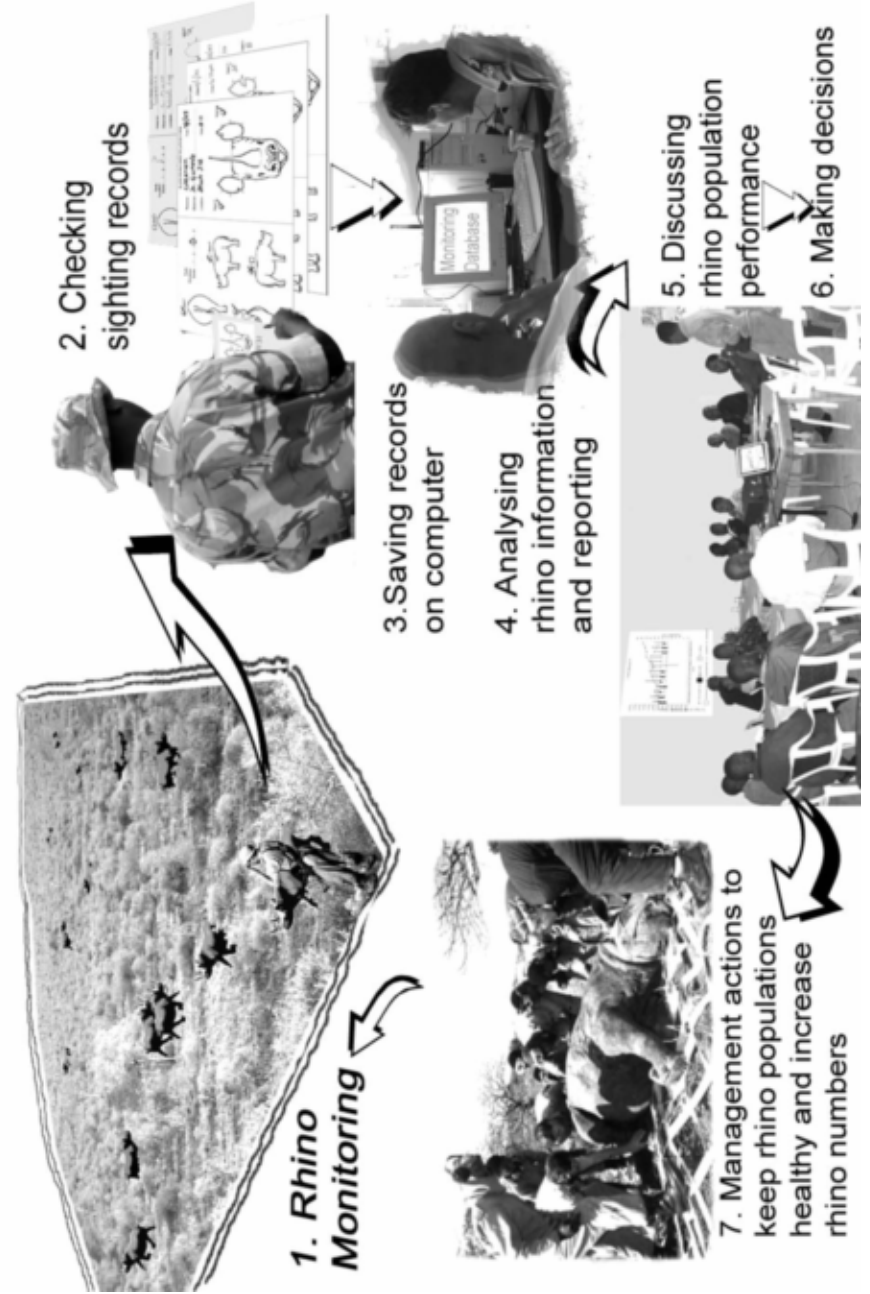


3

Condition assessment

Rump quite hollow. **Hip-line** clear but **hip bones** not sharp. Slightly hollow along **spine**, which is just visible (slightly raised) now. **“Sweet spot”** flat or a bit hollow. **Shoulder** not rounded but flat, with shadow lines of scapula showing. **Neck** still a bit thick (not narrow yet).

THE IMPORTANCE OF GOOD MONITORING INFORMATION



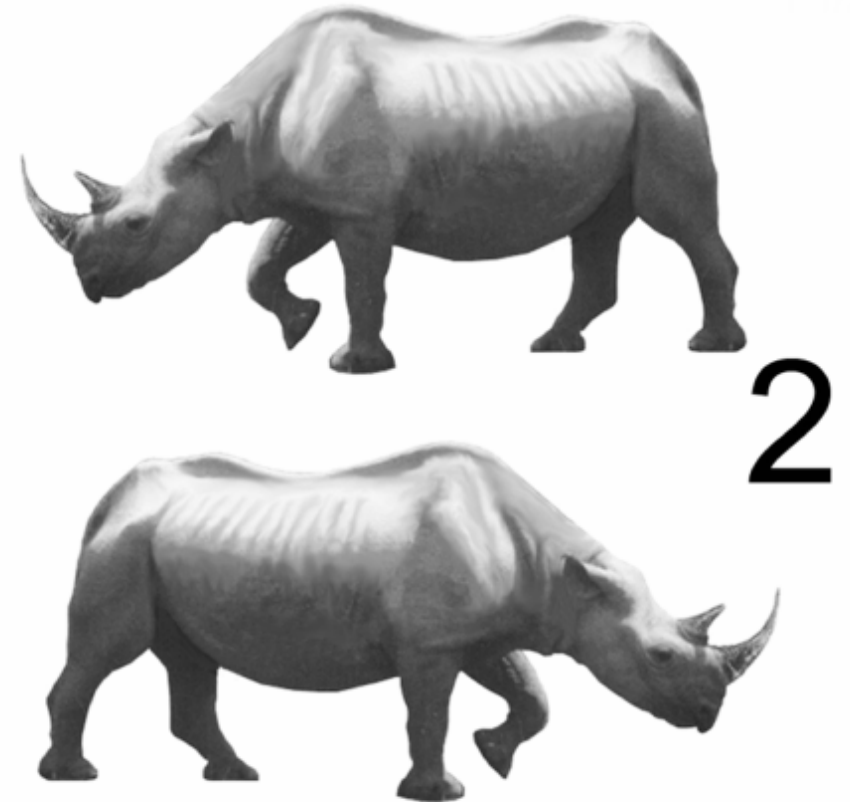
KEY POINTS: FINDING, APPROACHING AND OBSERVING RHINO

Patrolling for rhino:

- Do not make a lot of noise - work quietly.
- Pay attention to your surroundings and signs of rhino and other animals.
- Spread out when patrolling to find rhino sign, e.g. spoor.
- Scan for rhino from highpoints.
- Walk into the wind (upwind) as much as possible.
- Use the best times of day (early morning/evening) to search for rhino.
- Get to know where rhino or their signs are more easily found.
- Practice following rhino signs and tracking rhino by their spoor
- Learn to judge the age of signs.

Approaching and observing rhino

- Stay aware of the wind direction (an ash-bag is useful for this) and take account of other animals or birds (e.g. oxpeckers) in the area and their possible reaction in alerting the rhino.
- Be aware of your own safety. Keep noting locations of climbable trees or vegetation you can safely hide behind while approaching a rhino. It may be better to hide behind a tree than to climb it (less noise).
- Do not move across the rhino's field of vision while it is looking your way - it will probably pick up your movements. If it looks up - freeze. If possible approach from behind a tree or bush to break up your silhouette.
- Don't rush in close and risk disturbing the rhino - With binoculars or a spotting-scope, you don't need to get so close. By observing from further back there is less chance of disturbing the rhino.
- Make the necessary observations and records quietly and as quickly as you can, but without compromising the quality of observation. Usually better to get ID first, photo second.
- Learn to approach a rhino without it knowing you are there and always aim to leave the rhino without disturbing it.



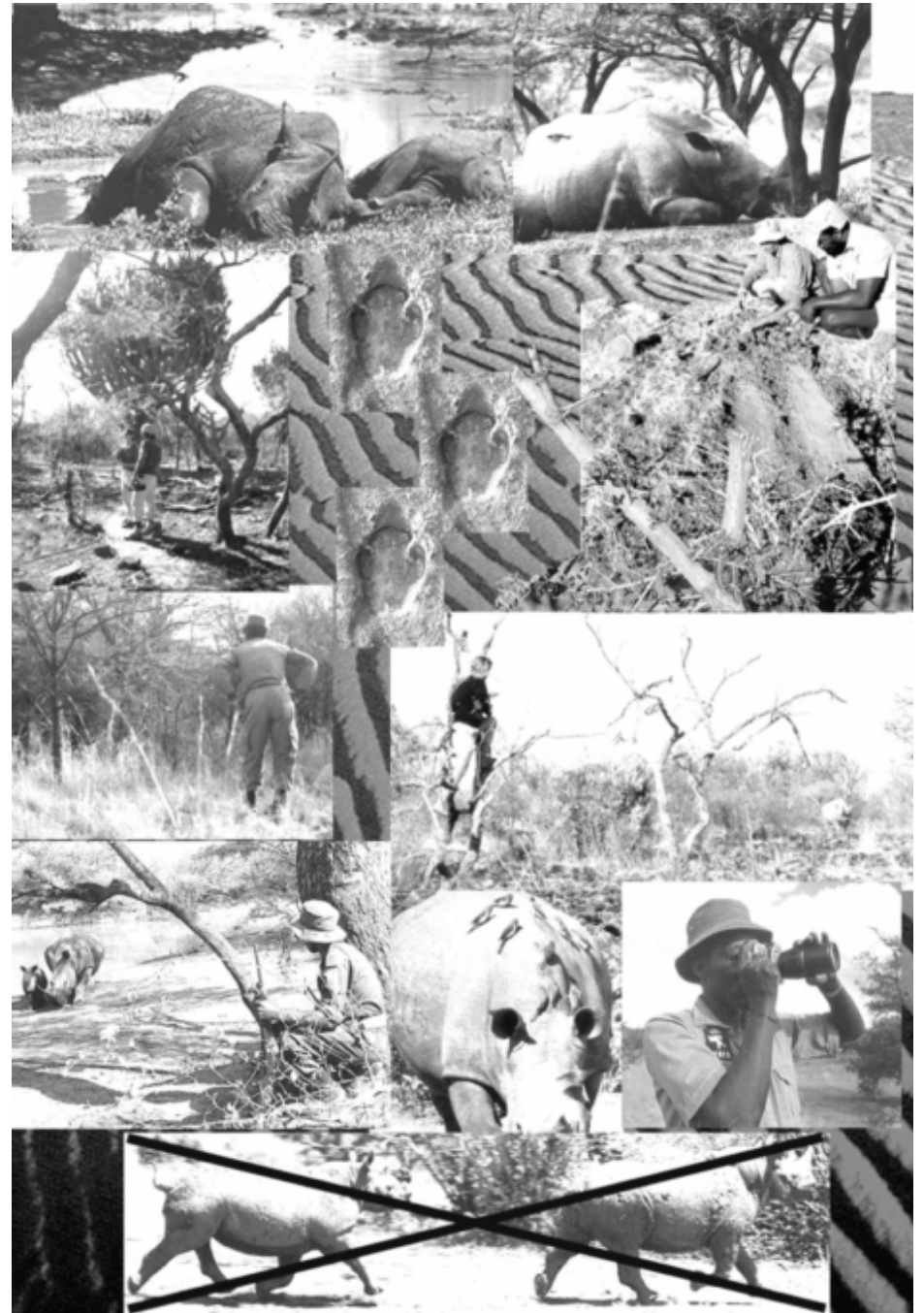
Condition assessment

Rump very hollow. **Hip-line** obvious. **Hip points** bony, **Spine** revealed above back (notably hollow along spine). "**Sweet spot**" hollowed. **Withers** and **neck** narrow. See general shape of **shoulder** blade.



Condition assessment

Rump totally hollow, sharply bony/stringy. Totally hollowed either side of **spine**. "**Sweet spot**" looks very raised. **Shoulder** blade edges + **spine** visible, looking sharp edged and bony. **Neck** very narrow, flabby.



RECORDING RHINO SIGHTING INFO KEY POINTS

(Illustrations are for black rhino but the same applies to white rhino).

- **Always use binoculars or a spotting-scope** - they allow you to see important details you could otherwise miss.
- If there is a group of rhino, each patrol team member can look at a different animal and record its details - Quickly decide who will do what. Treat clean and ID animals the same—Don't just focus on ID animals.
- **Fill in one form per rhino if possible.**
- Look at the **ears** of the rhino carefully. **Check for any nicks, notches, cuts, tears or deformities and note their sizes, shapes and positions.** These are the most important features which identify the rhino as an individual. If the rhino has no ear markings, it is called a "clean" rhino.
- **Draw the details (especially position) of any ear markings accurately.** The more you practice, the better.

BLACK RHINO IDENTIFICATION FORM

Seen? Reserve: _____ Date: _____
Body Condition Score: 1 2 3 4 5 Observer: _____
Location: _____ Time: _____

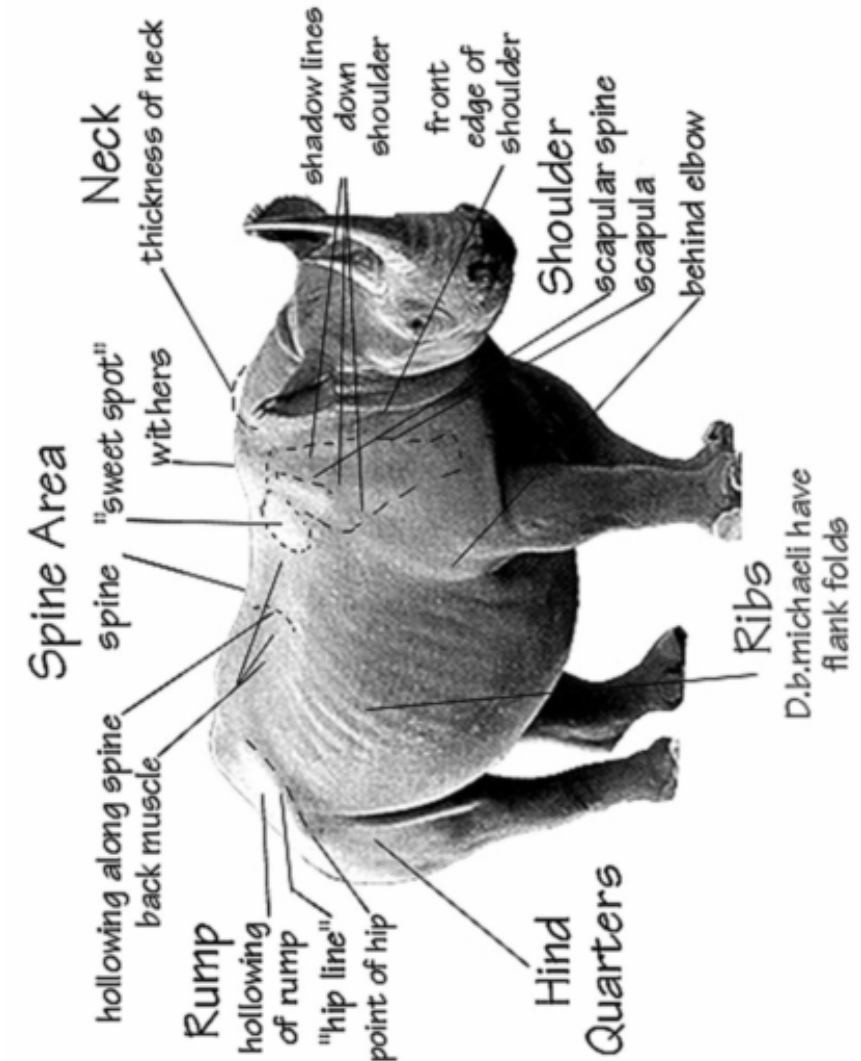
Seen? Seen?

Seen? Seen?

Seen? Seen?

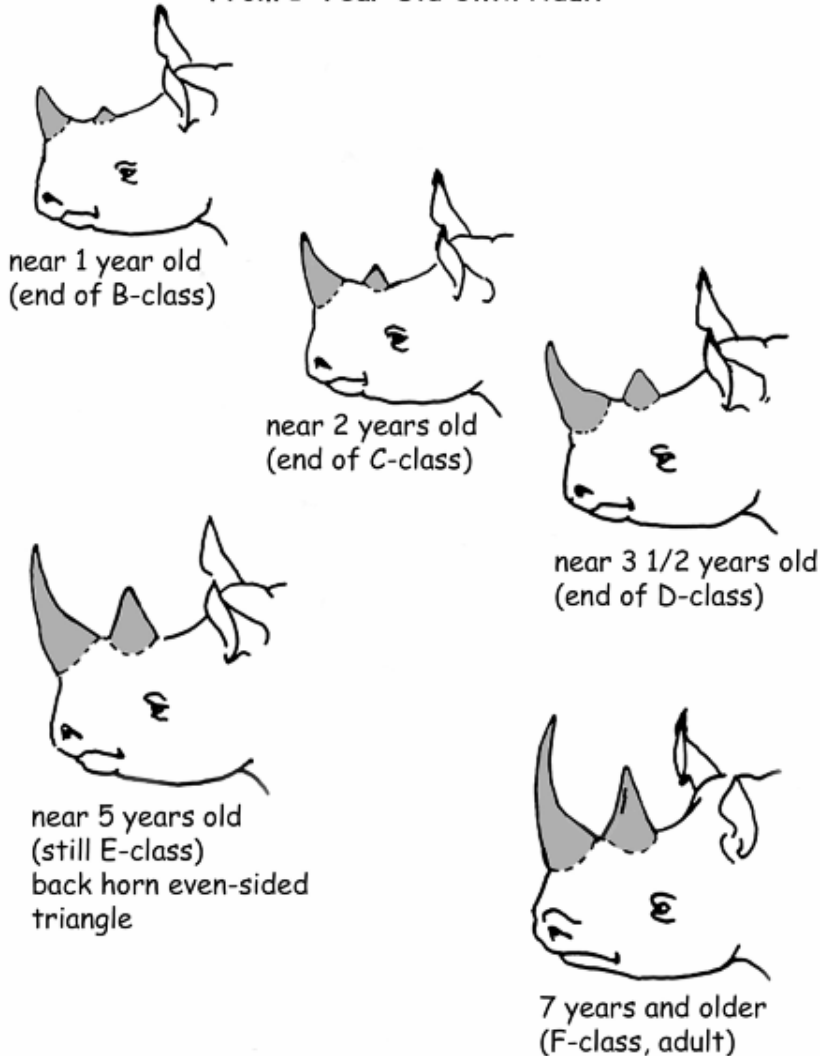
- **Don't confuse right and left ears.** Remember "left hand left ear".
- If any ears are "clean" you must record this. **Always draw definitely clean ears.** This is very important as **clean rhino sightings are just as important as sightings of identifiable rhino.** This is because good quality clean rhino sightings are needed to accurately estimate population size.
- **Always fill in the Seen? tick boxes** to indicate whether you saw each ear well or not. If you didn't see an ear well, put an **X** in the Seen? box. **An incomplete sighting is not a clean rhino.**

BODY REGIONS FOR CONDITION ASSESSMENT



- **Shadows are needed to reveal body features.** Rhino should be **back-lit** (i.e. sun on far side of rhino). Early morning or late afternoon lighting is usually best.
- **Don't assess condition if lighting is "flat".**

Approximate Appearance of Horns in Black Rhino
From 1 Year Old Until Adult



- If possible, use a horn-chart derived for your park as horn growth and wear can vary from area to area.
- Peaked or chunky backhorn = a useful F class indicator

- Determine the **sex** of a rhino by looking at its sexual organs (backside/underside area) - **Only record the sex as male or female if you actually saw these features - Never guess** or make assumptions. **Record sex accurately or not at all.**
- Determine the **(A-F) age-class** of the rhino - Again, **do not guess or make assumptions.** Look carefully. If you didn't see, tick ? (unknown). **Record age accurately or not at all.** Use the standardised A-F age classes (to allow comparison between years and parks).
- If possible, try to estimate the age of young rhino in months or years. Do this by examining their body size relative to their mother and their horn size patterns.
- Draw the correct shape and size of the rhino's **horns** onto the data form. **Look carefully at the horns to do this.** Check for any unusual shapes or markings on the horns.

Total:

	A (age)	B (age)	C	D	E	F
Group:	♂					
	♀					
	?					

Sex: ♂ ♀ ? UNKNOWN

Age: A B C D E F

Period observed: Disturbed ? Y/N

Distance (m): Binocs? Y/N

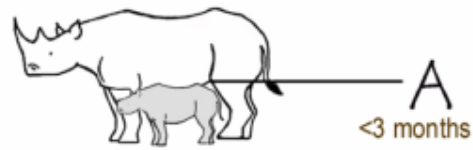
Lighting:

Notes:

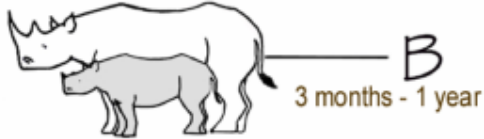


- Look carefully at the rhino head and body, and record any **scars, or damage to tail** (but not skin lesions which can vary with age & season).
- Carefully determine and record the **body condition** of the rhino. **Do so only if lighting suitable** (ie need shadows).
- Write in the rhino's **location** - place name, or preferably map reference or GPS reading.
- If you have time try to check your form against the animal (especially your ear drawings). Have you missed any notches or drawn any that aren't there? Have you marked all the tick boxes? Have you filled in the group details?

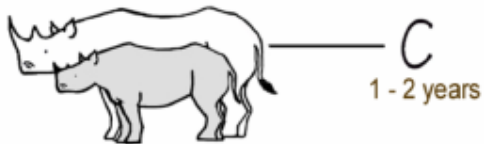
STANDARDISED BLACK RHINO AGE CLASSES



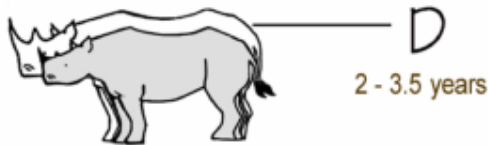
A
<3 months



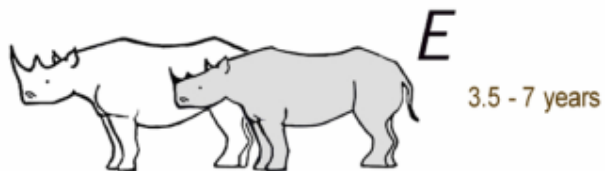
B
3 months - 1 year



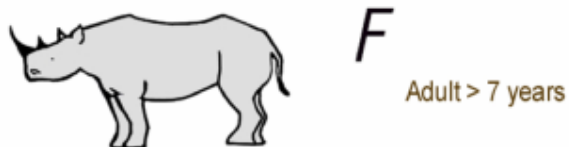
C
1 - 2 years



D
2 - 3.5 years

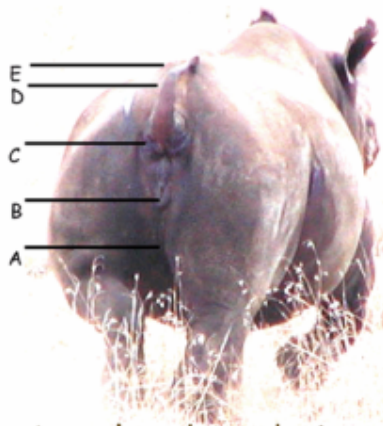


E
3.5 - 7 years



F
Adult > 7 years

- A and B = First Year animal
- A,B,C & D = (Dependent) **Calf**
- E = (Independent) **Sub-Adult**
- F = (Independent) **Adult**



Age class boundaries

- Compare calf shoulder height against mother.
- If level with boundary—use younger age class
- Four key boundary points to distinguish A-E
 - Inguinal Region (udders)
 - Bottom of vulva
 - Base of tail (middle of where it joins body)
 - Half-way from base of tail to sacral bump (the bump at the back)

AGEING OF BLACK RHINO CALVES OF 0 - 12 MONTHS



0 - 1 month

straight, sharper



1 - 2 months

at c. 2 months, front horn just visible



2 - 3 months

at c. 3 months, back horn just visible



3 to 4 months



4 to 5 months

very rounded horn tip



7 - 8 months



c. 12 months

very slight curve

11-12 months calf (c. 1 year old)

