The Comprehensive Guide to Tracking Skills
The Comprehensive Guide to Tracking Skills
How to Track Animals and Humans by Using All the Senses and Logical Reasoning

by
Cleve Cheney
This book is dedicated in humble thanks to
the Creator of heaven and earth.

To my dear family:
my wife, Bernice; son Hunt;
and daughters Jess, Tamaryn, and Ami;
sons-in-law Rudi, George, and Earle;
daughter-in-law Lizanne; and my grandchildren
Ben, Ethan, and Bella.
You give meaning to life.
I love you all dearly.
TABLE OF CONTENTS

Acknowledgments ........................................................... vii

Chapter 1
What Is Tracking? ............................................................... 1
  • Introduction ................................................................ 1
  • Aims and Objectives .................................................. 2
  • Practical Applications ................................................ 3

Chapter 2
Teaching Yourself to Track ................................................... 5
  • Sensory Optimization and Logical Reasoning ............. 5
  • What Is Sign? .......................................................... 6
  • Tracker Awareness ................................................... 20
  • Reawakening the Senses .......................................... 24
  • Learning Methodology .......................................... 47
  • Substrate Character ............................................... 59
  • The Qualities of a Good Tracker ................................ 69
  • Conclusions .......................................................... 69

Chapter 3
Understanding Wildlife Behaviour ......................................... 75
  • The Key to Tracking Wild Animals ............................ 75
  • Feeding and Drinking ............................................. 76
  • Habitat Preference ................................................ 79
  • Grouping Behaviour .............................................. 80
  • Breeding Behaviour .............................................. 82
  • Care of Young ..................................................... 84
  • Aggressive Behaviour ........................................... 84
  • Submissive Behaviour ......................................... 85
  • Social Behaviour .................................................. 86
  • Self-Advertising Behaviour and Territoriality ............ 86
  • Predator and Danger Avoidance .............................. 87
  • Play Behaviour .................................................... 87
  • Danger Signals ..................................................... 88

Chapter 4
Identification of Mammal Tracks and Sign ............................ 89
  • Identification of Mammal Tracks .............................. 89
  • Track Distortion ..................................................... 95
  • Partial or Distorted Track Identification ..................... 103
  • How to Tell Which Track Is That of a Canine, Feline, or
    Hyena ................................................................. 113
  • Scat Identification ............................................... 116
  • Estimating Age from Fluid Signs ............................ 126
  • Collecting Scat Samples ....................................... 128

Chapter 5
Gait Patterns and Pressure Releases ....................................... 129
  • Gait Patterns ........................................................ 129
  • Interpreting Gait Patterns ...................................... 133
  • Pressure Releases ................................................ 134

Chapter 6
Blood Trailing ................................................................. 163
  • Blood Sign .......................................................... 163
  • Size of the Wound Channel .................................... 163
  • Wound Channel Opening ...................................... 163
  • Organ and Tissue Damage—Types of Bleeding .......... 167
  • Interpreting Blood Sign ......................................... 169

Chapter 7
Tracking Specific Animals .................................................. 171
  • Tracking the Big Seven ......................................... 172
  • Tracking “Nondangerous” Species ........................... 202

Chapter 8
Track, Stalk, and Approach ................................................ 241
  • Animal Senses ..................................................... 241
  • Avoiding Visual Detection ..................................... 243
  • Avoiding Detection by Scent (Smell) ....................... 253
  • Avoiding Detection by Sound ................................ 255

Chapter 9
Bird, Reptile, and Invertebrate Sign ..................................... 259
  • Birds .................................................................. 259
  • Reptiles ............................................................. 276
  • Insects and Invertebrates .................................... 281

Chapter 10
Tracking Man ................................................................. 289
  • Combat Tracking ................................................ 289
  • Antipoaching Tracking .......................................... 330
  • Search and Rescue Tracking (SAR) ......................... 342

Chapter 11
Dangers of the Bush ........................................................ 357
  • Insects, Spiders, and Scorpions ............................... 357
  • Reptiles ............................................................. 361
  • Wild Animals ..................................................... 364
  • Environmental Dangers ....................................... 364
  • Confrontation with Armed Poachers ...................... 367

Conclusion ................................................................. 371
ACKNOWLEDGMENTS

I wish to thank my wilderness trail brothers for their companionship. We lived and shared the good years. Two great trackers who were better than I will ever be inspired me: Ozias Cubai, who passed away in September 2011, and Ringane. They were my ranger colleagues, mentors, and friends. This book is a tribute to them both. I will always fondly remember and cherish the years we spent in the bush together. Thank you for teaching me all I know about practical tracking in the wilds of Africa, for your patience with a slow learner, and for sharing your skills. I will always be truly grateful. Without you two this book would never have happened.

I want to say a special thank you to Ringane for the unforgettable days we shared as we walked side by side through thousands of kilometers of bush—a country that we both love so dearly. I still see you in my mind’s eye as you stand resolutely next to me, unmovable and dependable, as we faced charges time and again from some of Africa’s most feared wild animals. I think back with nostalgia to the hundreds of campfires we shared with quiet companionship. Thank you for being my teacher and friend.
WHAT IS TRACKING?

Introduction

Tracking principles are universal. Because they are consistent, the principles you will learn in this book can be applied anywhere in the world. The species of animals might differ, but the way that soils, substrate, and vegetation responds will be the same. All animals have behaviour patterns—they mark territories, they vocally advertise their presence, they use shelter, and they utilize game paths. Birds, invertebrates, and mammals of any given system interact with one another; therefore, the one can give clues about the other.

To make good observations and draw sound conclusions in the natural environment, one must be very familiar with what is “normal” in the particular natural system where one is operating. Deviations from the normal are then easier to detect.
Aims and Objectives

What Is Tracking?

Tracking can best be described as learning to use all your senses to monitor your surroundings and to make logical and realistic deductions from what you have observed.

Simply put, it is observing “signs” with your senses—sight, taste, touch, smell, and hearing—and interpreting what is observed using sound reasoning and previously learned knowledge. There is also what could best be described as a “gut feel” component that goes beyond the five senses. It is an ability acquired by experienced trackers with advanced skills.

There has always been an air of mystery associated with tracking. The uninitiated stand awestruck at a tracker’s ability to “read” sign and draw significant conclusions from what appears to be very scant and inconsequential evidence.

It is the express purpose of this work to unravel some of the mystery and to reveal the logic of tracking skills. This book will help put at least a modicum of ability within the reach of every individual prepared to expend the time and energy in learning the principles of tracking and then putting these ideas into practice.

The aims and objectives of tracking are to recognize and interpret sign for some practical purpose.
WHAT IS TRACKING?

Practical Applications

Tracking can be broadly classified into activities associated with wildlife and those aspects relating to the tracking of the human species.

Wildlife Tracking

Tracking is most often associated with something to do with wildlife. The term “wildlife” should not be mistakenly understood as pertaining only to animals. The term must be understood in its broadest context to encompass all components of the natural system both living (mammals, birds, insects, reptiles, plants, etc.) and nonliving (water, soil, climate).

People who lived prior to the modern technological age were very dependent on tracking skills to survive in the environment of the hunter/gatherer. The whereabouts and type of game that provided food, clothing, and implements had to be established before it could be trapped or hunted. To do this successfully the hunter/gatherer had to have an intimate knowledge of the local wildlife. Hunts often involved following up on animals that had been wounded or poisoned. The skill to track also provided the individual with the ability to recognize and avoid danger and to find the things necessary for sustaining life in a natural environment. The list necessary for life included not only food but also water, shelter, and medicinal plants. A tracker’s skill is directly related to his knowledge of all aspects of the natural environment.

In the modern context, wildlife tracking is associated with hunting, guiding, and conservation activities.

Hunters either have to learn tracking skills themselves or have to make use of “trackers” during hunting activities. Tracking in the modern hunting context revolves primarily around the identification of mammal tracks and scat (droppings) and the follow-up of wounded animals. This often involves following blood spoor.

Professional guides are called upon to interpret natural sign on a far wider scale to clients with the aim of familiarizing people with natural phenomena and with monitoring the environment for safety reasons. This can encompass a wide variety of interpretive skills. These include the identification of calls and tracks of birds, mammals, amphibians, insects, reptiles, and arachnids (spiders and scorpions); the identification of plants (especially edible and medicinal plants); recognition and interpretation of animal behaviour; and an understanding of how weather and geology (soils) have an effect on plant and animal distribution. Professional nature guides are also frequently called upon to track animals so that visual sightings can be obtained.

In the conservation field, tracking skills are utilized to identify sign that can assist in establishing the presence, behaviour, movements, and habitat preference of wildlife (again in the broadest context) species. Tracking skills are also required to follow-up wounded or injured animals. Tracking skills are also important in locating animals that have run off after having been darted during chemical immobilization operations. The ability to recognize and interpret natural signs also enables the individual to be aware of and avoid possible danger.

Trackers involved in some aspect of “wildlife” tracking are intensely aware of the interrelatedness of all components that collectively make up what is referred to as the ecosystem. They need to
have a broad-based understanding and knowledge of all aspects of the natural world.

**Man Tracking**

Human presence and activity, like that of animals, presents or leaves behind evidence. It is possible, therefore, to also identify and interpret human sign for some specific purpose.

**Man tracking is the identification, interpretation, and follow-up of signs present or left behind by the human.**

In this context man tracking would be included in military activities, antipoaching operations, criminal investigations, and in searching for fugitives or lost persons.

In the military context, trackers are sometimes also referred to as scouts, “recces,” or “point men.” It is their responsibility to search for, identify, and interpret signs left behind by the enemy to warn of their presence, help locate their whereabouts, establish what they are up to, and in some instances to avoid the enemy or to make it difficult for the enemy to follow.

Criminal tracking would include all aspects of forensic investigations at crime scenes as well as following signs left behind by a criminal intending to evade capture. This can include the physical tracking of a suspect or escaped fugitive from the law.

**Antipoaching operations** incorporate aspects of both military and criminal tracking but because of its specific nature can be regarded as a field of its own. Antipoaching tracking involves all aspects relating to the identification and interpretation of signs associated with poaching activities as well as follow-up operations aimed at apprehending poachers.

The third type of man tracking is the one associated with the search for missing persons. It must be understood that although one makes a distinction between wildlife and man tracking and also between different types of man tracking, there are commonalities as well as differences.
Sensory Optimization and Logical Reasoning

We evaluate what is going on around us through sensory input. If we do not regularly exercise our muscles, they atrophy and become weak. The same can happen if we do not train our senses. They can become lazy and operate at suboptimal levels. This will mean that we will not be as aware of what is going on around us as is possible, and we will lose a lot of potentially valuable, even lifesaving, information.

**Sensory optimization means learning to train your senses so that they are used to best effect.**

As a tracker, you want to assimilate (take in) as much sensory information as possible. The sorting of this information will take place at a cognitive level. This means that you will use your brain to integrate (bring together) information gathered by your senses and your powers of reasoning to make logical deductions and establish an order of priorities as to how you will respond.

**Logical reasoning is the capacity to sort and interpret incoming information to best effect.**

The fundamental foundation of good tracking skills is vested in your ability to use your information-gathering systems (sight, hearing, smell, taste, and touch) to best effect and then correctly interpret information from signs. Correct interpretation of signs also depends heavily on the knowledge bank you have accumulated over time.
What Is Sign?

The tracker’s source of information is sign. What is sign? Wild creatures live in association with, not in isolation of, their environment. As they are going about their daily activities, they are constantly leaving behind evidence of having been there.

A sign includes anything that can be produced or left behind by living creatures and that can be perceived by our five senses.

We could, therefore, list signs as things that can be perceived by our sense of sight, those that we can hear, and those that we can smell, touch, feel, or taste.

Visual Sign

A visual sign is one that can be detected using eyesight. There are many examples.

Tracks

A track or spoor refers to impressions left by feet, paws, claws, hands, or other body parts (e.g., an elephant’s trunk dragging) on the substrate. See Figure CCCH.02.02.01.

A lot of information can be obtained from tracks: when the track was registered, the age of the animal (adult/subadult/young), the group composition (single/pair/`herd`), the size, the speed, and direction of travel, the condition of the animal, the sex, and the activity.

Excretions

This refers to scat (droppings/feces), urine, and saliva. See Figure CCCH.02.02.02.

Scat and urine can also provide useful information. By determining the age of the sign, it is possible to figure out how long ago the animal was there. The scat’s shape, colour, and configuration can identify the species. The content and consistency of the scat can indicate the diet and often also the condition of the animal. The distribution pattern can show whether the species is territorial or not.

The way the scat is deposited can also give an indication of the species involved and the gait of the animal at the time the droppings
were deposited. Is it spread out (the animal was moving), broken up and scattered (hippo, black rhino), in a pile (the animal was stationary), or buried with soil (steenbok)?

Scat and urine are often indicated by the presence of flies and the noisy flight of dung beetles. The presence of flies and dung beetles will indicate to the tracker that fresh scat is close-by. See Figure CCCH.02.02.03.

The relative position of urine to the scat can sometimes indicate the sex of an animal. See Figure CCCH.02.02.04.

Figure CCCH.02.02.04: In this photograph the relative position of the scat pellets to the patch of urine indicates that a female impala deposited it.

Scat and urine are often indicated by the presence of flies and the noisy flight of dung beetles. The presence of flies and dung beetles will indicate to the tracker that fresh scat is close-by. See Figure CCCH.02.02.03.

The relative position of urine to the scat can sometimes indicate the sex of an animal. See Figure CCCH.02.02.04.

Figure CCCH.02.02.05: Examples of a feeding sign are when cud was dropped from the mouth of an herbivore during rumination (left), seeds were dropped by feeding vervets (middle), and broken vegetation was left behind by feeding elephants (right).

Figure CCCH.02.02.06: Places where animals drink can usually supply the tracker with a lot of information.

Figure CCCH.02.02.07: Some animals such as elephants and rhinos will dig for water in dry riverbeds.
Feeding and Drinking Sign

Animals leave signs when they feed. See Figure CCCH.02.02.05.

Scat content that can indicate whether the animal is a browser, grazer, mixed feeder, carnivore, omnivore, or insectivore. Scat will also give evidence of how the food was procured, handled, and disposed of, and it can indicate the species involved, preferred habitat and diet, and when the animal was there.

Examples of feeding signs include saliva, gnawing marks on trees, a clearly defined browse line in preferred habitat of resident browsers, cud (chewed vegetation) dropped from the mouth, the remains of animals killed by predators, grass cropped close to the ground by grazing animals, broken vegetation, stripped bark, and so on. Places where animals drink are a mine of information. See Figure CCCH.02.02.06. Many animals will dig for water in dry riverbeds. See Figure CCCH.02.02.07 and Figure CCCH.02.02.08. Smaller
species will then make use of these “wells.” Drops of water can spill from an animal whilst it is drinking or moving away from a watering point. Sometimes the evidence of feeding is obvious; often it is more subtle and requires greater powers of observation.

**Scent and Territorial Marking**

Scent plays an extremely important role in the lives of animals. Depending on the species, scent-producing glands may be found at the anus, on the face below the eyes, on the forehead, below the eye, on the feet above the hock, or between the toes. Scent is

---

**Figure CCCH.02.02.12:** The impala ram is horning a bush to rub off facial secretions (left). On the right is a paper-bark acacia that has had a good rubbing.

**Figure CCCH.02.02.13:** This nyala bull is horning the ground and will leave clear sign of having done so.

**Figure CCCH.02.02.14:** A white rhino midden (left) and an impala midden (right).
also incorporated in urine and scat. See Figure CCCH.02.02.09 and Figure CCCH.02.02.10.

Some animals define territorial boundaries by marking or by depositing dung, urine, or some form of secretion on the ground or on surrounding vegetation.

This can be observed as scrapes on the ground (e.g., white rhino). See Figure CCCH.02.02.11. An animal will also paste, meaning it will wipe anal secretions onto vegetation by straddling it (e.g., civet and hyena). Then there is shrub horning (e.g., impala and kudu—see Figure CCCH.02.02.12) and horning the ground (e.g., nyala and bushbuck—see Figure CCCH.02.02.13). Animals will also deposit scat in piles called middens or latrines (e.g., some antelopes and rhino). See Figure CCCH.02.02.14.

**Wallows and Dust Baths**

A number of animal species enjoy wallowing in mud. They are so partial to this pastime that they sometimes take on the colour of the local soils. Thus, it’s not unusual to see a “red” white rhino (if the soils of the area are reddish in colour) or a “white” black rhino (if the soils are light in colour).

Why do they wallow? Well, for a number of reasons but mainly for the pure enjoyment of it! Next time...
you see a warthog heading for a mud wallow, take the time to stop and watch. It will be most entertaining. Watch as it slithers this way and that in the oozing, gooey, sticky mud. You will almost feel so inclined as to want to join in the fun. Animals wallow also as a means of thermoregulation, which is a means of controlling body temperature. Most species that wallow are dark-skinned. Buffaloes, rhinos, blue wildebeests, elephants, and warthogs are addicted to wallowing. See Figure CCCH.02.02.15.

Because they are dark-skinned, they tend to absorb radiant (light) energy, and this can cause them to overheat when temperatures hit the midthirties (Celsius) or higher. Rolling in mud cools the skin and helps to keep an animal’s body temperature within normal limits.

Thirdly, when mud hardens, it entraps external parasites. When the animal rubs this mud off onto trees, rocks, or termite mounds, the entrapped parasites are dislodged. See Figure CCCH.02.02.16.

Certain wallows become very popular, and their long-term use can cause them to deepen and develop into semipermanent water holes. Each time an animal wallows in a water hole, it becomes deeper because some mud adheres to and is carried off by the animal.

From a tracking perspective, following mud sign is exciting and fun. It is fairly easy to follow and find an animal that has been wallowing.

It is fairly obvious to see when a mud wallow has recently been used. See Figure CCCH.02.02.17. It will be churned up and the exit point will be quite obvious. The body of the animal often leaves an impression in the mud, making it easy to identify which animal has been wallowing. Muddy footprints will lead away from the wallow and bits of mud will begin dropping off the animal as it moves away into the bush. See Figure CCCH.02.02.18.

Not only will bits of mud drop off, but mud will be scraped off on surrounding vegetation as well. The trail left behind is fairly easy to follow, but the amount of mud sign decreases the farther the animal moves away from the wallow. See Figure CCCH.02.02.18. The amount of moisture retained in mud can also give the tracker a good indication of how far behind the animal he is.

Mud tracking is a good opportunity for someone learning to track because it is relatively easy to follow, and the tracker is often rewarded with a sighting of the animal being tracked. Following an animal that has been wallowing is fairly simple even on substrate where other signs (such as tracks) do not show up well.

The height of the mud adhering to vegetation when passing by or when rubbing will indicate the size of the animal and the degree of moisture retention the age of the sign. See Figure CCCH.02.02.19 and Table 2.1.

Figure CCCH.02.02.18: Signs left behind from an animal walking away from a mud wallow include bits of mud on the ground. The amount of mud sign decreases the farther the animal moves away from the wallow. On the right, notice how the mud was scraped off onto a bush as the animal walked past.

Figure CCCH.02.02.19: The height of mud scraped or rubbed off will give an indication of the type of animal: an elephant rub on tree (top) and warthog rub on a small termite mound (above).
Table 2.1

<table>
<thead>
<tr>
<th>SPECIES</th>
<th>HEIGHT OF RUB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elephant</td>
<td>2.5–3.4 m</td>
</tr>
<tr>
<td>White rhino</td>
<td>1.8 m</td>
</tr>
<tr>
<td>Black rhino</td>
<td>1.6 m</td>
</tr>
<tr>
<td>Buffalo</td>
<td>1.4 m</td>
</tr>
<tr>
<td>Warthog</td>
<td>65 cm</td>
</tr>
</tbody>
</table>

Rolling in sand or dust is also a grooming activity often practiced by zebras and wildebeests. This is usually seen as a dusty, bare patch where the substrate has been disturbed. See Figure CCCH.02.02.20.

Shade and Cover
Animals will seek out shade during hot weather and cover during cold or inclement weather. The tracker will, therefore, look in these places for additional signs such as bedding areas (which might still feel warm if recently vacated), cud falling from the mouth of ruminants, and scat. See Figure CCCH.02.02.21.

Rubs and Bark Stripping
Animals will sometimes use objects such as trees, fallen logs, and rocks on which to rub themselves to relieve an itch or scrape off mud during grooming. Figures
During the dry season, elephants will often strip and eat tree bark to supplement dietary needs. See Figure CCCH.02.02.24.

**Paths**

Game paths are usually most distinct around water holes and favourite feeding areas. Well-utilized paths often have a layer of fine soil covering them as a result of hoofs breaking down coarser soil. This is conducive to leaving distinct spoor impressions that can help to identify which species were present.

Active game paths can have a wide variety of tracks and sign, both fresh and old. The super imposition of tracks upon one another can also give an indication of sequence of events and the age of tracks. Figure CCCH.02.02.25.

**Bedding Areas, Burrows, Nests, and Shelters**

Some animals will be continually on the move choosing different resting and sleeping sites. Others will make use of holes or burrows to which they will return on a regular or irregular basis. The species that make use of underground burrows include porcupines, aardvarks, aardwolfs, warthogs, springhares, dwarf mongooses, wild dogs, bat-eared foxes, Cape foxes, and black-backed jackals. Figure CCCH.02.02.26. An occupied burrow will usually have some sign of occupation, such as the presence of flies, bones scattered around the entrance, spoor leading into and out of the hole, freshly excavated soil, and so on. The shelters or bedding sites of animals, which do not use burrows, will often be seen

---

**Figure CCCH.02.02.24:** During the dry season, elephants will often strip and eat tree bark to supplement dietary needs.

**Figure CCCH.02.02.25:** Game paths are a source of much information.

**Figure CCCH.02.02.26:** A variety of species use underground burrows for nesting and for shelter: a warthog burrow (left) and a hyena den (right).

**Figure CCCH.02.02.27:** Note how the vegetation in this bedding area is attenuated. The size and shape of the bedding area can also give an indication of the type of animal or bird.
as flattened grass or vegetation, or body impressions left on soft substrate. See Figure CCCH.02.02.27. These bedding areas will usually be found in shade or areas providing cover from the elements.

**Blood Sign**

The ability to follow and correctly interpret blood sign is an important tracking skill.

The colour and amount of blood can indicate whether bleeding is from an artery, vein, or capillary. Figure CCCH.02.02.28. The clotting process of blood can give the tracker a good indication as to the age of the blood sign. Following a blood trail is important when trying to locate a wounded animal or human.

**Skeletal Signs or Carcasses**

Skeletal remains can indicate the presence of a particular species in a given area and can also indicate the presence of predators. Figure CCCH.02.02.29. Carcasses and skeletal signs may be present as a result of death by natural causes, death by accident, or death by disease.

**Interpreting Visual Sign**

The modern city dweller has, to a large degree, lost the ability to observe signs correctly in the bush. Small signs escape their notice and even large animals like elephants and buffaloes are sometimes not seen, even at short range. Figure CCCH.02.02.30. The city eye looks for complete objects. When looking for a kudu, for example, the unpracticed eye will look for the whole animal. The bush-wise and skillful tracker will know to look for “parts” of the animal—part of a leg sticking out from under a bush, a glint of sunlight off a horn, the rounding of a rump showing through dense vegetation. Another trick is to learn to look “through” vegetation and not “at” it. If one allows the focal point to shift from “at” to “beyond” an intervening object, the tracker is able to see and observe much more acutely.
Olfactory Sign

Olfactory sign is that which can be detected using our sense of smell. Some animals have a very characteristic smell and emit odours specific to the particular species. An example is an elephant in musth. The author, as an exercise, once tracked a bull elephant in musth for about two kilometers by following the lingering smell of musth in the air and surrounding vegetation. Another example is the buffalo, which have the typical bovine odour of cattle. Then there is the goatlike odour of waterbuck, which can sometimes be smelled from a distance. Dung and urine also have characteristic odours. The smell of smoke can warn the tracker of an oncoming bushfire, or the presence of a poacher’s camp. The smell of rain in the distance can give the tracker warning of a possible flash flood, giving him time to move out of drainage lines.

Sound Sign

Most emphasis is placed on the visual aspects of tracking. That is logical because we make the most use of sight to search for visual clues or sign.

Sound, an extremely important aspect of tracking, does not always receive the attention it deserves.

The bush is filled with sound that can vary with intensity depending on the time of day and prevailing weather conditions. At times the bush can also be profoundly silent, and this, too, tells a story.

Just think for a moment of all the possible sources of sound. Animals, amphibians, and birds all possess vocal cords and are capable of vocalizing. They can also generate noise by their footfalls, brushing up against vegetation, or breaking branches. Snakes do not possess vocal cords but can hiss or make a rasping sound by rubbing scales together. Many insects are equipped with anatomical
Behaviour of Other Animals and Birds

The behaviour of other inhabitants of the bush can often be of assistance to the tracker, and sometimes a hindrance. Birds like red-billed oxpeckers and cattle egrets can warn you of the presence of animals such as impalas, buffaloes, giraffes, elands, kudus, and rhinos. See Figure CCCH.02.02.31. They can also warn these animals of your presence. Even if you are not tracking these species in particular, it is important for the tracker from a safety perspective to be aware of the presence of these animals.

Ground birds such as francolin, quail, and guinea fowl, flushing up from under the feet of animals can warn you of their presence and whereabouts. Francolin and guinea fowl are often very vocal and noisy when flushed and can be heard a long way off. Fork-tailed drongos frequently hang around grazing animals. As the animals move along, they flush up insects from the grass. The drongos then swoop down to catch the insects. Gray louries emit a raucous call when observing humans and predators. Other bird species such as double-banded sand grouse can lead you to water. See Figure CCCH.02.02.32.

Carrion-eating birds such as vultures can lead the tracker to sites of kills or warn them of the presence of large predators. Vultures, kites, marabou storks, and some eagles are

Figure CCCH.02.02.31: Cattle egrets (top) and red-billed oxpeckers (above) can indicate the presence of animals, including dangerous species such as buffaloes, rhinos, and hippos.

Figure CCCH.02.02.32: The behaviour of birds such as fork-tailed drongos (left), guinea fowl (centre), and double-banded sand grouse (right) can warn of danger or the presence of animals, humans, and snakes. They can also help the tracker find food or water.