

# TRACKING IN BEAR COUNTRY\*

by Rawdon O'Connor

As Shadowhawk's unofficial tracker at large, I spend my holidays travelling the world to meet experienced trackers and discover their techniques. This often takes me into areas with potentially dangerous animals whose track and sign it is advisable to learn in order to adapt to the risks of working in such areas. Although I am familiar with African animals and have qualified there as a Nature Site Guide for dangerous animal areas, North America presents some interesting differences for the newcomer.

In June and July 2009, I spent three weeks in **Yellowstone** with Dr Jim Halfpenny of 'A Naturalist's World', one of the world's authorities on tracks and especially gait patterns, and a specialist in large carnivores:



*A Black Bear in Yellowstone*



Based on the northern boundary of the Park, we spent most of our time in the Lamar Valley, home to perhaps three wolf packs and their prey (elk, mostly), and sometimes referred to as the Serengeti of North America. With over 40 years experience as a scientific tracker, Jim's boundless enthusiasm and experience provided me with an insight into the track and sign available in the Park, from the largest (bison) to the smallest (deer mice) and the techniques needed to find and identify them.

**Yellowstone National Park, situated at the northern end of the North American Rocky Mountains, has long been known for the splendour of its volcanic geological formations.** It also boasts an impressive collection of wildlife and, since 1995/96 has been the scene of a successful re-introduction of wolves from Canada. In a very real sense, these wolves have been protected from human interference by the presence of a significant bear population. Although park visitors may wander at will on and off the many hiking trails, there is an understandable reluctance to do so, given the ever-present threat of attack by bears: one might describe this as 'the grizzly effect'.

## RISKS AND SOLUTIONS

*In practice, this threat is low. In three weeks there, I saw only two bears, both of them black bears, a species that seldom causes any real injury nowadays.* The situation has improved considerably in recent decades with the efforts of the Park's management to keep bear/human interactions to a minimum. Feeding the bears is strictly forbidden, for example, and dead animals are swiftly removed to areas away from roads and other places where scavenging bears might find themselves in conflict with hikers or motorists. Advice on camping and hiking is freely available from the Park authorities and written advice is posted up throughout the Park.

**Although low, the bear threat remains, however, very real.** In the summer, female grizzly bears with cubs of the year will not tolerate surprise encounters with humans. They will charge and attack incautious hikers and, since their primary target is the human face and head, such attacks are always traumatic, if seldom immediately fatal, for the victims. Adult male grizzlies, during territorial disputes, will also not hesitate to take out their stress on humans. Black bears, although normally placid enough, have been known to attack, kill and eat humans, especially children.

**The rule is, therefore, to submit to a grizzly's assault but to fight back with all one's might against a black bear.** Given that black bears are not necessarily black in colour and that an attack by a grizzly will be launched from close range at lightning speed, the first challenge is to be able to recognise the species with some certainty - in split seconds.

Likewise, since firearms are forbidden in the Park, the sole legitimate means of active defence is 'bear spray', a strong pepper spray with an effective range of 'adequate', carried in such a way as to be immediately available. According to those who should know, given the right circumstances, it is very effective.

**BEAR SPRAY COMES WITH ITS OWN SET OF DISADVANTAGES, HOWEVER, NOT LEAST OF WHICH IS THE DANGER OF A CANISTER 'COOKING OFF' WITHIN A PARKED HIRE CAR, EFFECTIVELY WRITING THE CAR OFF AS FAR AS THE RENTAL COMPANY IS CONCERNED. CASUAL IMPACT, EITHER ON THE TRIGGER MECHANISM OR BY PUNCTURING THE CANISTER ON A ROCK, CAN ALSO LEAD TO A NEGLIGENT DISCHARGE AND CAUSE AGONISING DISTRESS TO ANYONE IN THE IMMEDIATE AREA, ESPECIALLY INDOORS. IT IS NOT A TOY.**

Three other significant threats exist for those working or hiking in Yellowstone. The first is that of being charged by a bison (*buffalo*), as this remains the major source of wildlife attacks within the Park (*two in June/July 2009*). Lone bison bulls may be found grazing all over the place and care must be taken to be seen by them at considerable distance so as not to spook them into a charge. Their sense of smell is limited, vision being their primary sense, so it makes good sense to pass in front of them if possible. Unlike Cape buffalo, bison attacks are seldom murderous but injuries from the horns may still be serious.



Yellowstone National Park

The second threat is that of lightning. Mountain storms brew up rapidly and anyone working out on the flats of the river valleys may quickly find themselves at risk on the treeless plains. A sound knowledge of lightning safety procedures is, therefore, also a must before walking out into such areas as, for example, when looking for tracks in the fresh mud and sand banks around the rivers.

A third threat also exists in the form of mosquitoes. Although not malarial, North American and Canadian mosquitoes are renowned for having cross-bred with mammoths at some point and can suck blood through the loosest clothing. DEET is the only solution and anyone wearing something more eco-friendly, such as citronella, will just attract extra mozzies, ie, those repelled by their colleagues who had the good sense to use DEET.

## TRACK AND SIGN



There are some great tracks to be found such as these Wolf prints...

With these precautions in place, there is some fascinating tracking to be done. Wolf tracks are there in plenty as the wolves travel around their extensive territories. Coyote, those fascinating members of the dog family, leave their track and sign everywhere. Bear prints may be found both on the ground and in the trees. Bison tracks obliterate as much ground as domestic cattle do in Europe but their sign exhibits some fascinating characteristics. Tracks of the pronghorn antelope, the continent's fastest animal, may be found almost everywhere and there are otters, beavers, elk and many other species to delight the European tracker, since they exhibit subtle differences from our own species.



## BEARS



The black bear is a creature of the forest, whilst the grizzly prefers the open ground beyond the forest edge.

Bear feeding sign often takes the form of torn bark on deadfall as they search for insects and grubs. As with all ant disturbance, the insects are most active immediately after the attack on their home, so freshly torn bark with ants milling around

is an indicator that the bear is not far away. Likewise, fresh scat is a clear indicator that one is in bear territory and that caution is necessary.



Bear tracks are large and it is the toes that usually draw my attention, perhaps because they resemble a barefooted human. Theoretically, it is possible to assess whether one is dealing with a grizzly or a black bear by the degree of curvature of the line of toes, placing a straight edge between the toe pads and the inter-digital pad and noting where it intersects the smallest (inner) toe pad; Black bears have a more curved pattern than the grizzly. In practice, however, this method may be less than certain for several reasons, eg, the individual bear, its movement and the ground surface.

Since black bears favour woodland, whilst grizzlies prefer more open areas with clear soil in which they can dig for roots and rodents, visible black bear prints are, therefore, less obvious. Since the grizzly is the greater threat, moreover, the amateur should assume that all fresh prints are grizzlies' until proven otherwise by some other sign.

*Especially when young, the black bear is happy to climb trees and may spend a hot afternoon resting in the highest branches of an aspen tree,* letting the cooling breeze blow through its thick coat, usually unseen above any madding crowds that may pass below. Accordingly, an interesting place to look for black bear sign is on the flanks of an aspen tree.

An aspen may live for a hundred years or so. Its silver bark, however, is fragile and shows the scars left by climbing bears throughout its life. As the bear climbs, so its rear claws dig into the bark, leaving a horizontal line of round holes. On the far side, its front claws leave a more angled line of holes, although the short scratches made during its sliding descent may be more obvious.

As the tree grows, so its girth increases and the distance between the claw-marks increases accordingly. These, therefore, tell us little of the bear that made the marks, however many years

A scarred Aspen

ago. The vertical interval, however, corresponds to the bear's walking stride and does not change as the tree grows older. As such, it is possible to measure the distance between corresponding claw-marks and estimate the body length of the bear. It is fascinating to think that a tree can record the passage of a cub that perhaps grew up and passed away decades ago as if it was yesterday. Jim rather likes the term 'dendroglyph' for this phenomenon, corresponding as it does to the 'petroglyphs' of our own ancestors, scratched in the rocks throughout the continent.

## BISON

The tracks of the bison are somewhat unusual: in spite of having cloven hooves, like cattle, the central ridge is not particularly apparent and, for adults in particular, the print resembles very much that of a horse in shape.

Instead of the triangular frog, however, there is a clear J-shaped hook inside the rear of each cleave (or 'clout' as they are known in America), which is distinctive.

Bison sign mainly takes the form of scats, either in the form of 'cow-pats' or 'chips'. The latter, the drier form, resemble a small stack of round biscuits and may be used as fuel. Indeed, like the domestic pig, there is little on a bison that cannot be made use of by humans. Bison are large, slow-moving animals that congregate in large herds or graze individually in a happy and contented manner. Once humans adopted more technological methods of hunting than simply stunning them with a rock (and it would have to be a very large rock), bison became a sort of 'free economy' for the people of the Plains until the animals' mass slaughter in the 19th century.

Bison sign is also evident on trees, where they horn the bark in long sweeping upward gashes and rub against the bark to remove their thick winter coats. As most of the trees in the Park are pine trees, which bleed resin easily, this hair sticks freely to the resin. As with all ungulate hair, it is corrugated ('undulating unguates', as Jim put it) and, being long and dark-brown, is easily distinguishable from bear hair. This is important, since grizzly bears, in particular, also like to rub hair off on trees, so long straight hairs may well indicate bear activity rather than bison.



Likewise, in summer, great clumps of brown bison hair appear all over the prairies, especially near the many dust-baths that may be seen everywhere as patches of bare earth on which the bison lie up and roll around to help the moult and to shed parasites.

In one spot, we found an area of mineral-rich dried mud, with visible salt rime, in which the bison had carved craters with their hooves. Inside these craters were what initially resembled two inch-wide paintbrush marks. On closer investigation, however, it became apparent that these were caused by the bison's rough tongues, like those of domestic cattle, as they licked up the mud for its salt content.

*My interests, however, lay more with pronghorn antelope and coyotes, two rather special animals from a tracking point of view. I also wanted to gain some experience of plate-tracking for small rodents and mustelids, a subject on which Jim Halfpenny is an authority. Having set the scene, however, a description of these experiences will have to wait for another time.*