

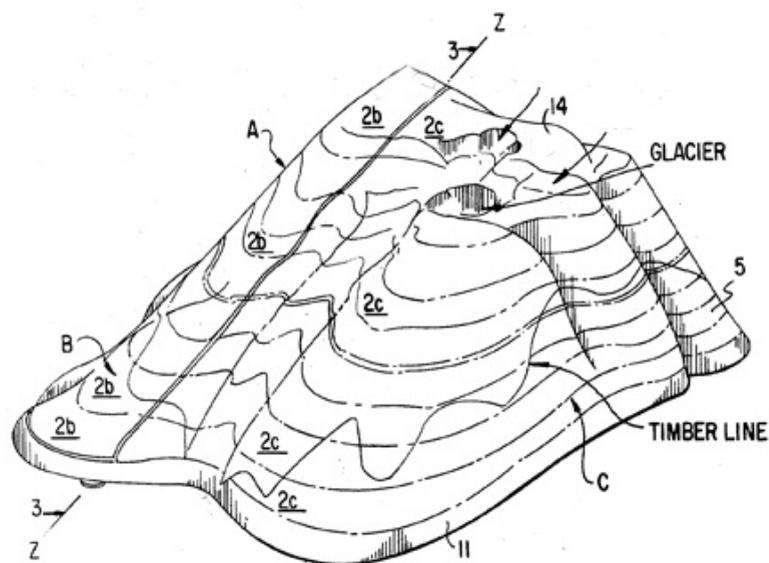
WEEK TWO

# READING THE SIGNS

LOTTE GEEVEN & SEMÂ BEKIROVIC

**MOUNTAINS**

Snow-covered peaks offer no food or shelter. Climbing and negotiating icefields call for skills which must be learned in mountaineering schools.

**JUDGING TERRAIN**

As you descend it is difficult to see what is below. Try moving along a spur to see what is below. The far side of a valley will give you an idea of what's on your side. The ground can fall steeply between a distant slope and a foreground bluff. Scree slopes are deceptive, appearing continuous until you are very close to a cliff.

**CLIMATE AND TERRAIN****ASCENT**

Climbing up, holds are easier to see, but it is safer to go round than over obstacles to avoid getting stuck. Plot a route from the bottom; keep body away from the rock, feet flat, and look up. Don't overstretch. Always keep three points of contact. Reach for a hold with one hand or foot, test it and seek a hold for the next hand.

**FINDING WATER**

Look in valley bottoms where water naturally drains. If there is no stream or pool, look for patches of green vegetation and dig there.

Dig in gullies and dry stream beds.

In mountains look for water trapped in crevices.

On the coast dig above the high water line, or look for lush vegetation in faults in cliffs: you may find a spring.



Be suspicious of any pool with no green vegetation growing around it, or animal bones present. It is likely to be polluted. Check edge for minerals which might indicate alkaline conditions. Always boil water from pools. In the desert, lakes with no outlets become salt lakes: their water must be distilled before drinking.

**DEW AND RAIN COLLECTION:** Use as big a catchment area as possible, running the water off into containers. A covered hole in the ground lined with clay will hold water. If you have no impermeable sheeting, use metal sheets or bark to catch water.

Use clothing to soak up water: tie clean cloths around the legs and ankles and walk through wet vegetation. These can be sucked or wrung out.

**RATION YOUR SWEAT NOT YOUR WATER!**

If you have to ration water, take it in sips. After going without water a long time, don't guzzle when you do find it. Take only sips at first. Large gulps will make a dehydrated person vomit, losing even more of the valuable liquid.

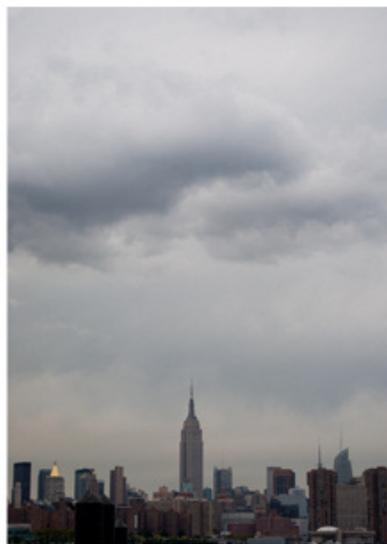
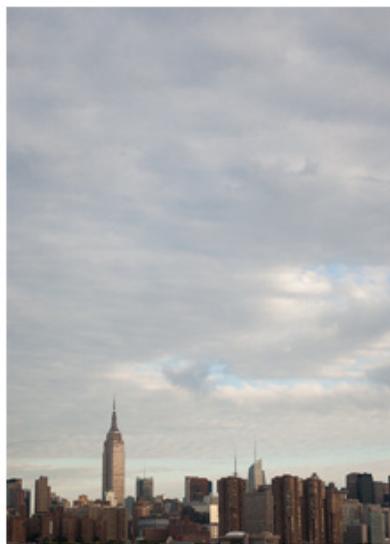
**ANIMALS AS SIGNS OF WATER****Humans**

Tracks usually lead to a well, bore hole or soak. It may be covered with scrub or rocks to reduce evaporation. Replace the cover.

↗ **CIRRUS CLOUDS:** High, wispy clouds formed from ice crystals which give them a white appearance. Seen in fine weather. 5–9 km (3.1–5.5 miles).

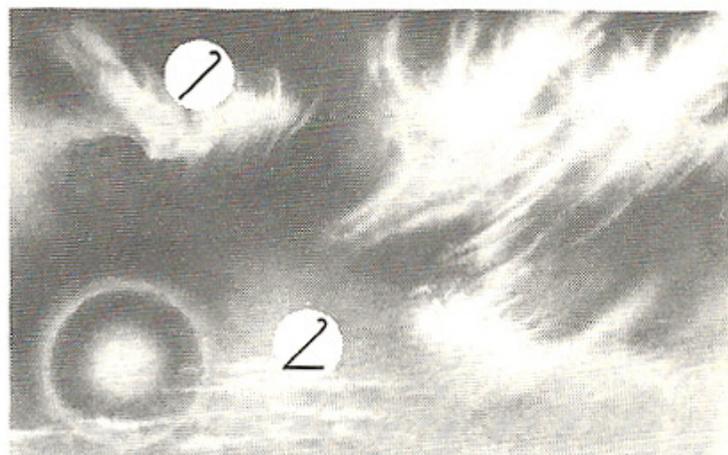
↘ **CIRROSTRATUS CLOUDS:** Made up of ice particles and look like white veins. These produce a halo round the sun or moon.

*If a cirrus-filled sky darkens and the clouds change to cirrostratus it is an indication that rain or snow is on the way. 5–9km (3.1–5.5 miles).*



— **Stratus clouds** are the lowest of clouds and form a uniform layer like fog in the air – they are often described as hill fog. Although not a normal rain cloud, they can produce drizzle. When they form thickly overnight and cover the morning sky they will usually be followed by a fine day. Less than 2.5 km (1.6 miles).

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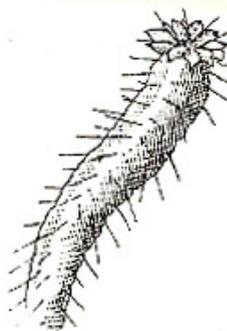


**READING THE SIGNS**

**PLANT POINTERS**

Plants can give an indication of north and south. They tend to grow towards the sun, so flowers and most abundant growth will be to the south in the northern hemisphere, to the north in the southern. Moss on tree trunks will be greener and more profuse on that side.

If trees have been felled, the pattern of the rings is more widely spaced on the side towards the Equator.



*A South African plant, the north pole plant, leans towards the north.*



*The compass plant is North American and directs its leaves in a north-south alignment so that profile from east or west is quite different from that of north or south.*

**WIND DIRECTION:** If the direction of the prevailing wind is known it can be used to maintain direction.

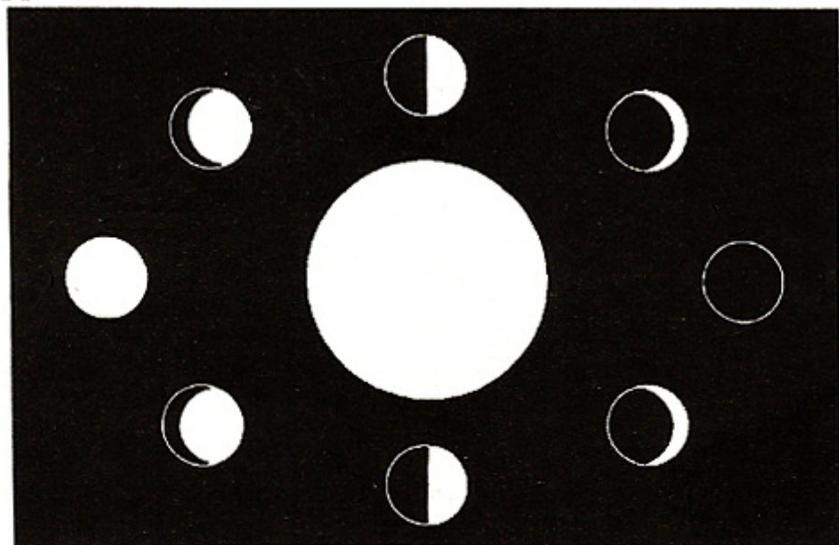
Where a strong wind always comes from the same direction, plants and trees may be bent that way. Birds and insects will usually build nests on the leeward side.

**DIRECTION BY THE HEAVENS****Using the moon**

As the moon orbits the earth over 28 days, the shape varies according to its position. When it is on the same side of the earth as the sun, no light is reflected from

**READING THE SIGNS**

the sun (a): this is the new moon. Then it reflects light on its apparent right-hand side in a gradually increasing area as it waxes. At the full moon it is on the opposite side of the earth from the sun (b) and then it wanes, the reflecting area reducing to a narrow sliver on the apparent left-hand side.



If the moon rises before the sun has set, the illuminated side will be on the west. If it rises after midnight the illuminated side will be the east. Thus the moon gives a rough east-west reference in the night.

**Using the stars**

The stars stay in the same relation to one another. Their passage over the horizon starts 4 minutes earlier each night – a 2-hour difference over a month.

In the northern hemisphere groups of stars remain visible throughout the night, wheeling round the only star that does not seem to move: the Pole Star (a useful navigation aid, located almost above polar north).

## READING THE SIGNS



Other stars that rise and set can be used to indicate direction. Set 2 stakes in the ground, one shorter than the other. Sight along them at any star except the Pole Star. From the star's apparent movement you can deduce direction in which you are facing:

## RESCUE

The International Mountain Distress Signal is six whistles a minute (or six waves, light flashes, etc.) followed by a minute's silence, then repeated.



*FIRE AND SMOKE:* Establish signal fires once immediate needs for treatment of injury and provision of shelter have been met. Gather fuel for camp and signal fires.

Place three fires in a triangle at equal distances apart. Failing that, a group of clearly separated fires will serve. If fuel is scarce, use only your campfire.

Signal fires should be kept dry, and maintained, ready to be lit to attract attention of passing aircraft.

Use tinder to get them going rapidly (see p. 173ff).

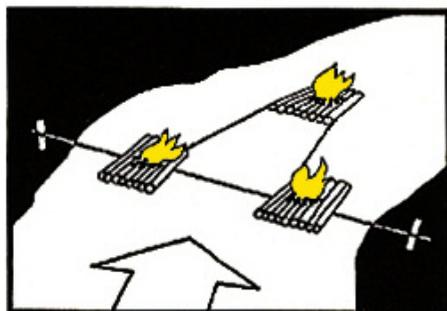
Petrol can be used as a firelighter but don't just pour it on. Lay a piece of petrol-soaked rag among the tinder. Don't light it at once. Carry the fuel can off to a safe distance. Wait a few seconds, then light the wick. If a fire does not light first time pull tinder apart and check for sparks or embers, before adding extra petrol.

Keep a stock of green boughs, oil or rubber close by to create smoke if needed.

Among vegetation or close to trees, build an earth wall round each fire to contain it.

Do not build fires among trees where the canopy will block out the signal. Place them in a clearing.

*If by a lake or river, build rafts to place your fires on and anchor or tether them securely in position. Arrow indicates direction of current.*



**TORCH TREES:** Use small, isolated trees for fire signals. Build a fire between the boughs using dry twigs or old bird's nests. This will ignite the foliage, producing lots of smoke. Fires at the base of dead trees burn for a long time, but don't risk starting a forest fire. Apart from the damage this will cause, your life will be in jeopardy.

**LUMINOUS CONE FIRES:** On a clear, open site make a tripod with a platform to support a fire. Use evergreen boughs as cover to keep the cone dry; they will burn

**RESCUE****SEARCH**

A search will start from the last known location and sweep on the proposed route. An assessment will be made of probable strategy adopted. The search will then be extended to cover the whole area. Ideally this will be done from the air but severe weather may mean it has to be done on foot.

Aerial search patterns will cover both sides of the intended flight path of missing aircraft or your known route. If weather conditions permit, a night search will be made, for lights will be visible from a great height and a wider area can thus be covered.

If you are signalling to an aircraft and it turns away, keep watching. It may be following a search pattern and you will be able to anticipate when to signal again. Most aerial searches involve parallel sweeps towards and away from the sun so any reflection from a missing aircraft or other wreckage and signals will be seen.

At sea, combined sea-and-air searches allow aircraft to locate survivors so that ships can pick them up.

**HELICOPTER RESCUE**

Helicopters are frequently used to carry out rescues. Where possible the pilot will land to take on survivors and fly them out. Survivors should check out suitable landing sites and create a site if necessary.

A helicopter requires an obstruction-free approach and exit path, both into prevailing winds. The ground should be level – a slope of no more than  $7^\circ$  (a gradient of 1 in 10) is acceptable. The touch-down surface must be firm and free of loose materials – no leaves, etc.

### SELECTING AND PREPARING A LANDING SITE

Find a natural clearing at least 26 m (80 ft) in diameter. A further 5 m (15 ft) it should be cleared to a height of 60 cm (2 ft). It must have a clear approach path into the prevailing wind with no obstructions within an angle of  $15^\circ$  of the landing pad (LP). In close country, seek a river bank on a large bend. On level high ground, fell trees so they fall downhill, clear of approach and exit paths. Don't attempt to cut an LP on flat ground.



For a night rescue use flares and fires to indicate your position. If using torches or other beams, shine them skyward to attract attention then shine them on to the touchdown or winching area. Don't dazzle the pilot.

When helicopter touches down, do not approach from the rear. This is a blind spot for the crew and the tail rotor is unprotected. On sloping ground always approach up the slope, never down a slope.

## WEEK TWO

We started exploring the peninsula from a bird's-eye view; flying over the area with a helicopter as though it were unchartered territory. With this image we constructed a basic map portraying both natural and manmade features including solid blue areas indicating rivers, streams, lakes and ponds, elevated areas, valleys, plains, green zones of vegetation, roads, boundaries and the major landmarks.

Back on the ground our expedition takes off. Using our own map and the SAS survival guide as a rough guideline on how to traverse an unknown area we start navigating the terrain. At night the constellation above the city guides us; during the day the sun and compass plants indicate north and south as we walk and collect data. As we go on, we hope to find answers to the questions at the heart of our expedition: are there discernible borders between nature and culture in a metropolitan environment? And, if so, what exactly constitutes these borders?



