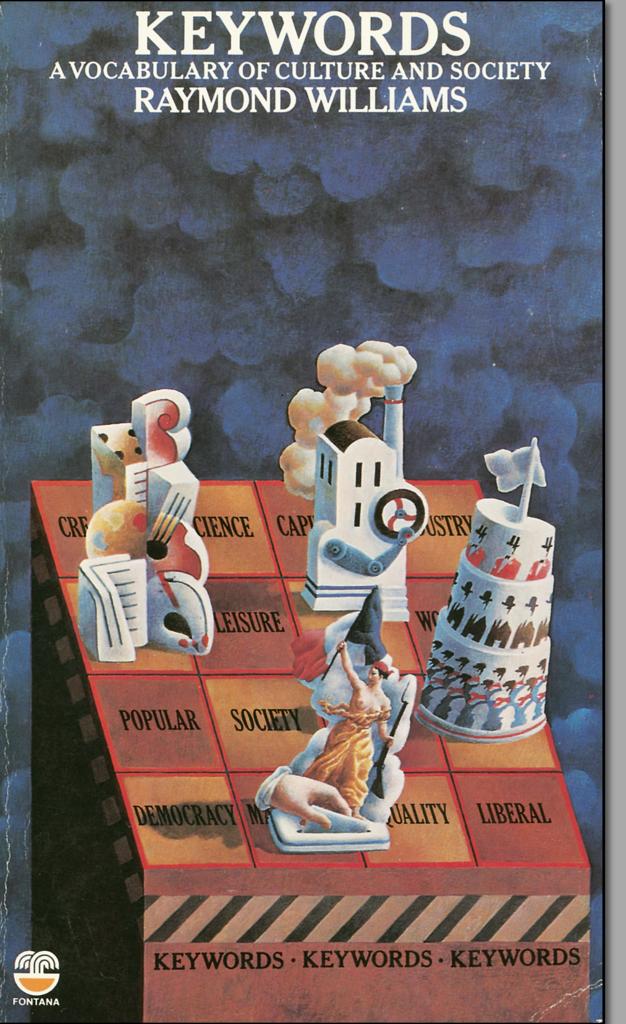
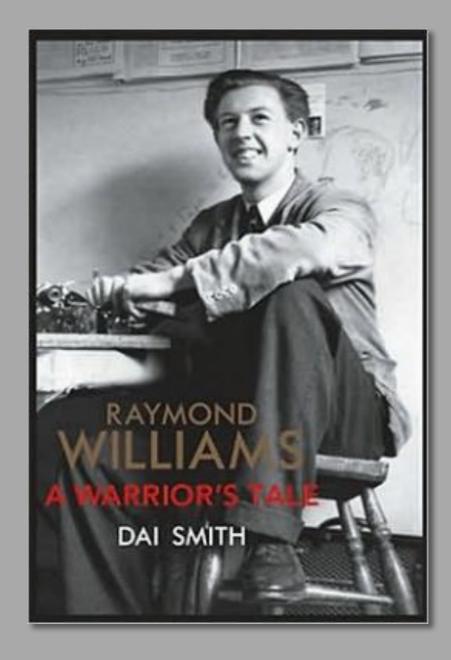




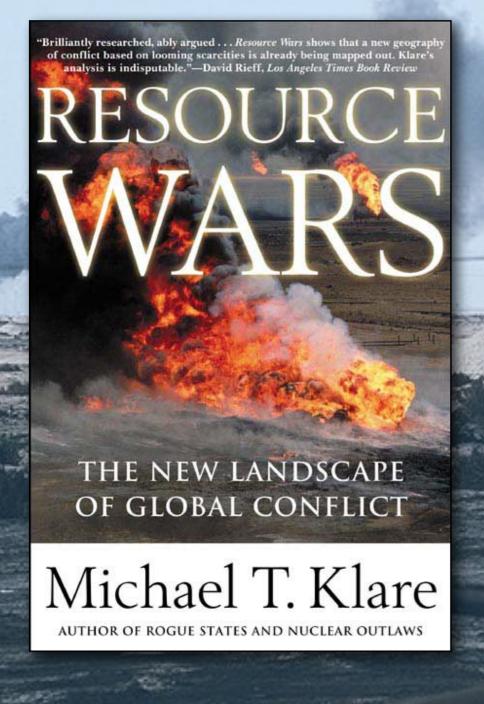
'Nature is perhaps the most complex word in the language.'

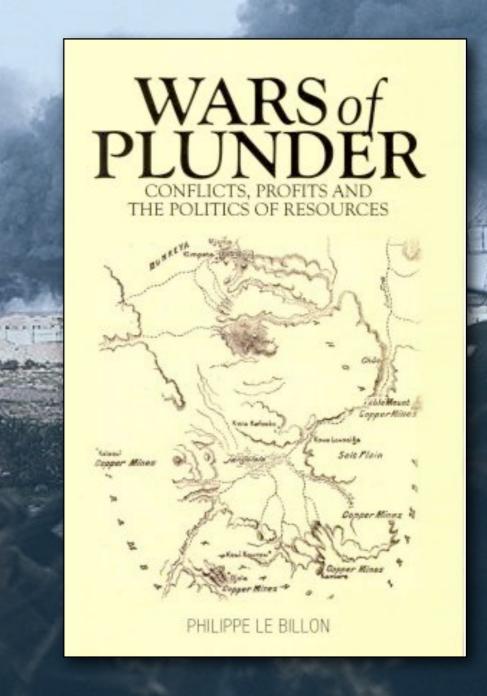


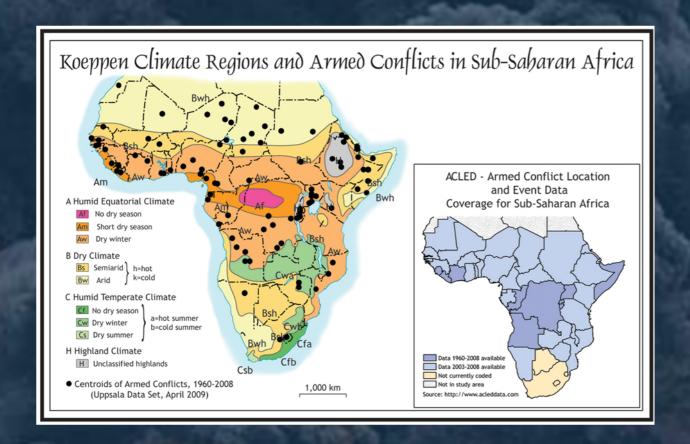


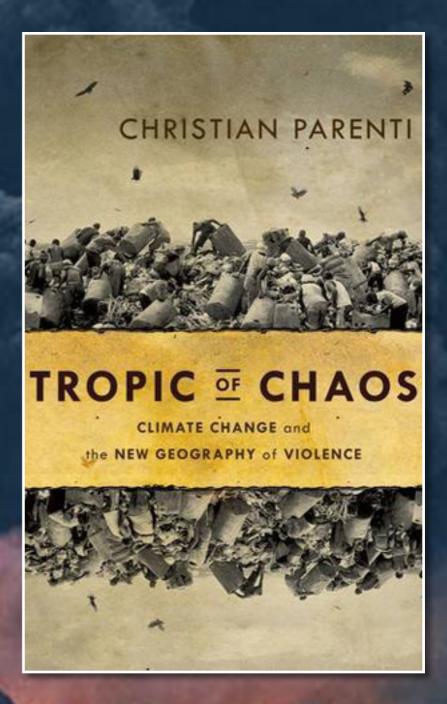
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Resource wars and conflict commodities

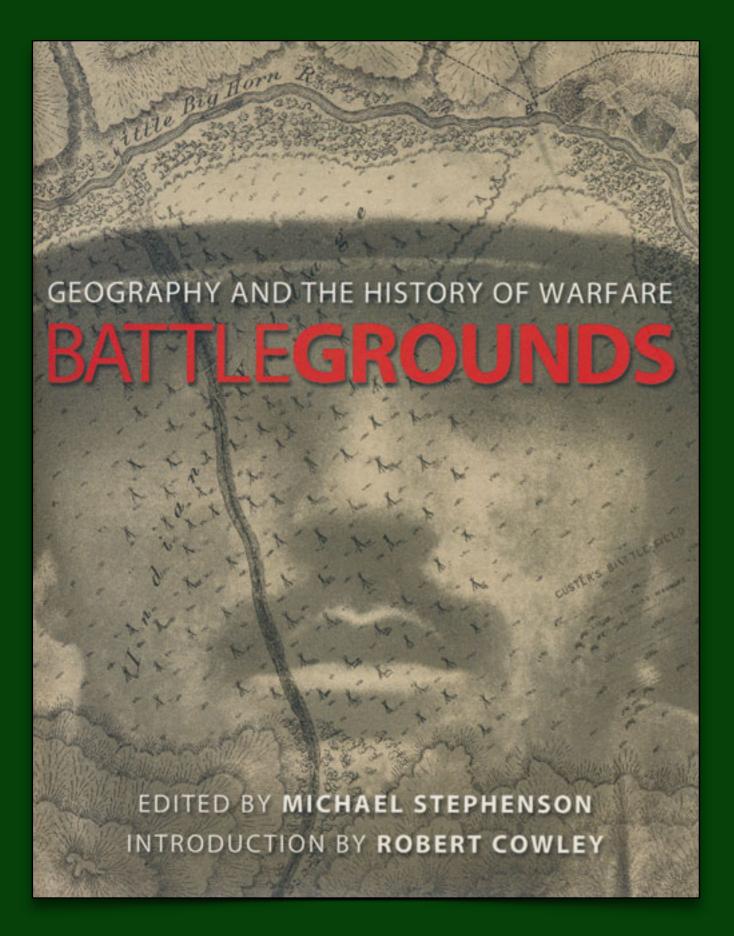








Global climate change, conflict and security



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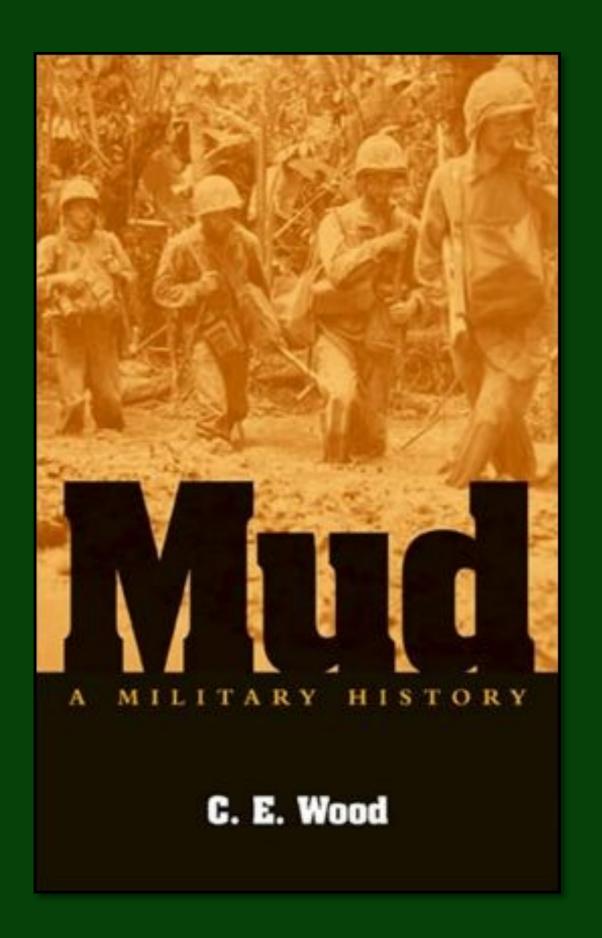
Battling the Elements

WEATHER AND TERRAIN
IN THE CONDUCT OF WAR

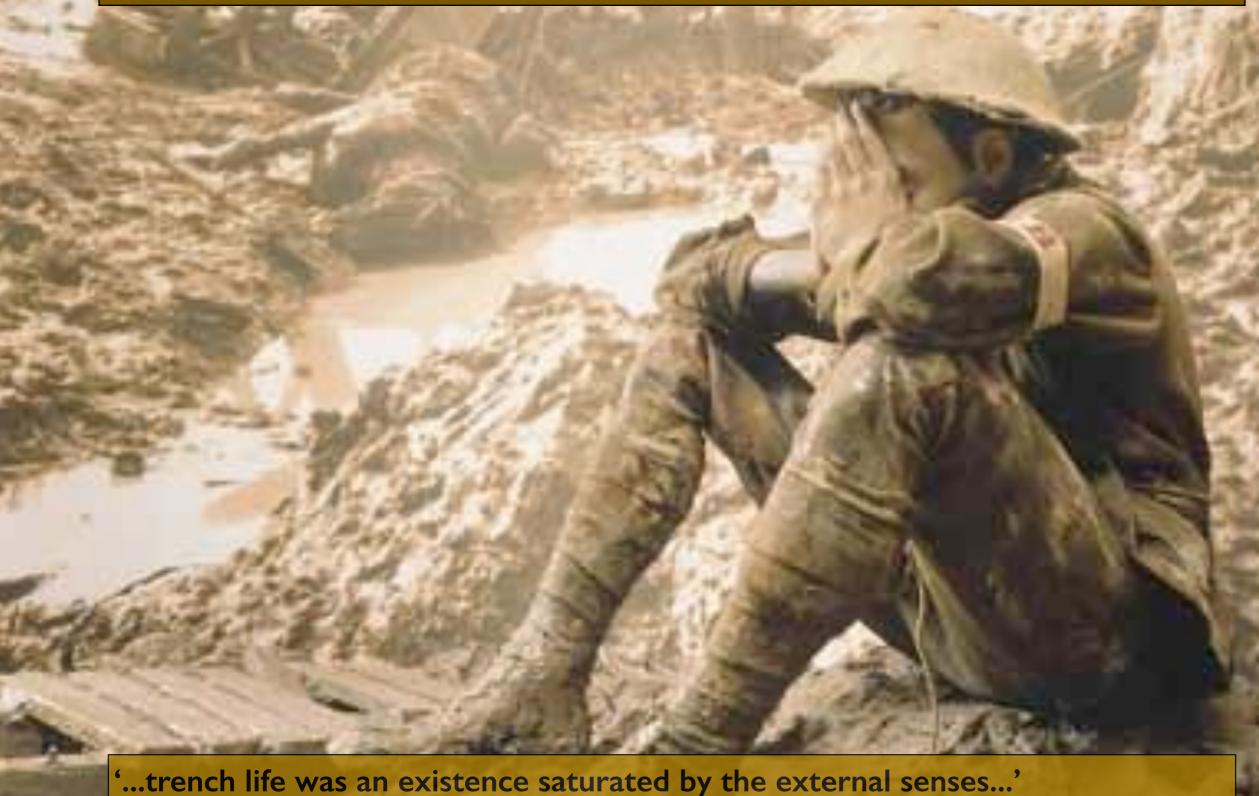


HAROLD A. WINTERS

with Gerald E. Galloway Jr., William J. Reynolds, & David W. Rhyne



1: The Western Front, 1914-1918



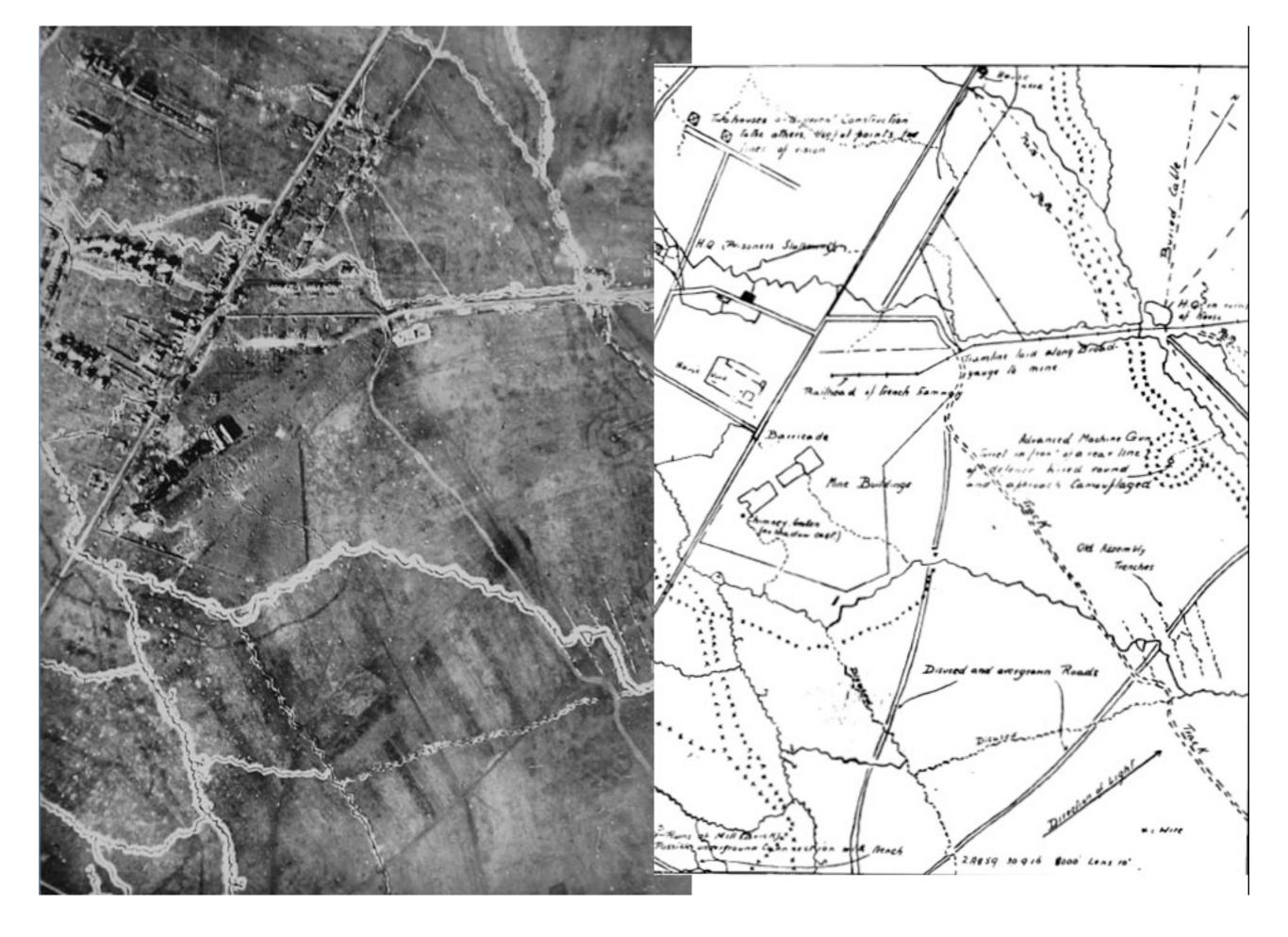
"...trench life was an existence saturated by the external senses..."

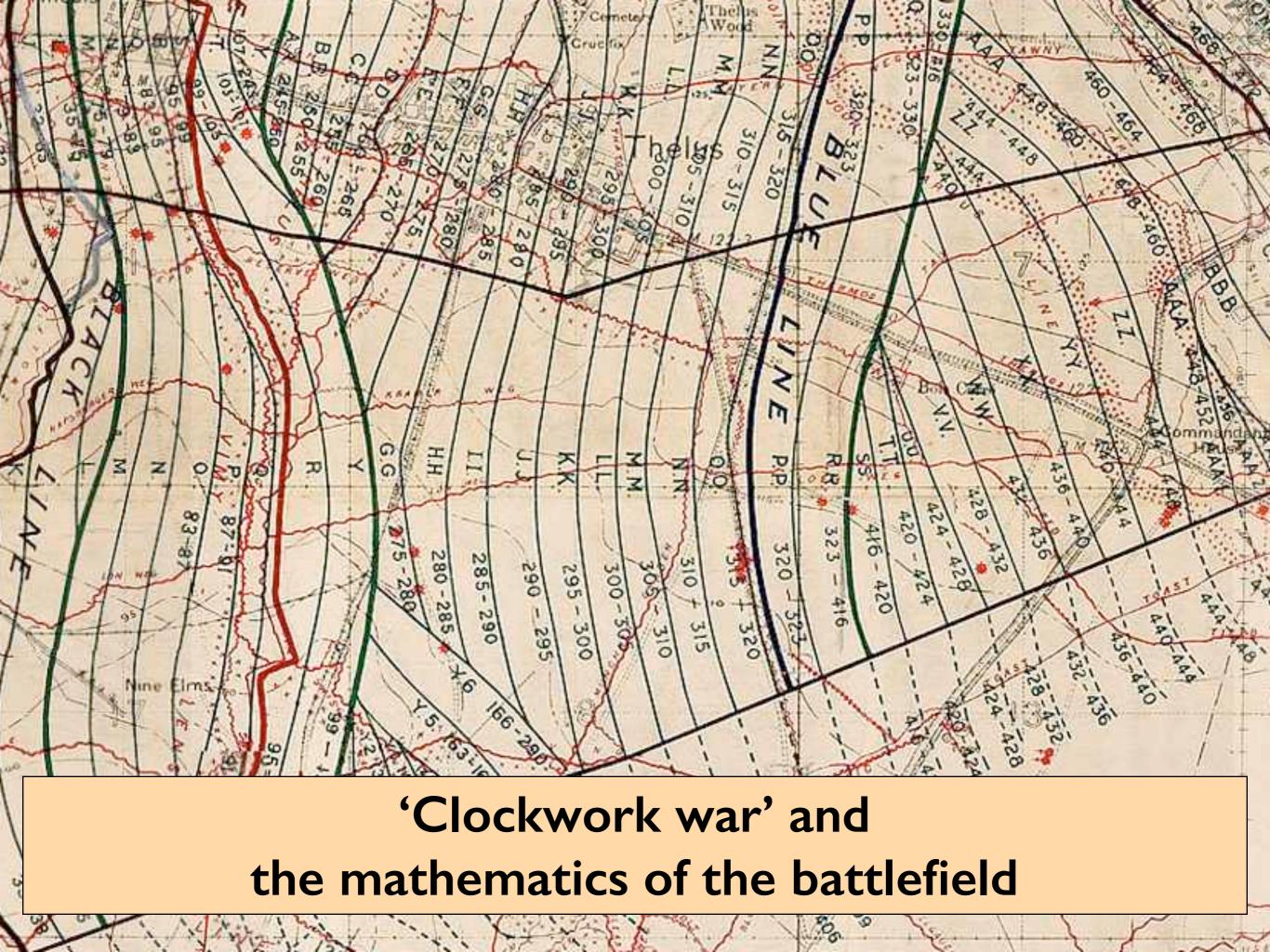
Siegfried Sassoon, Memoirs of an infantry officer

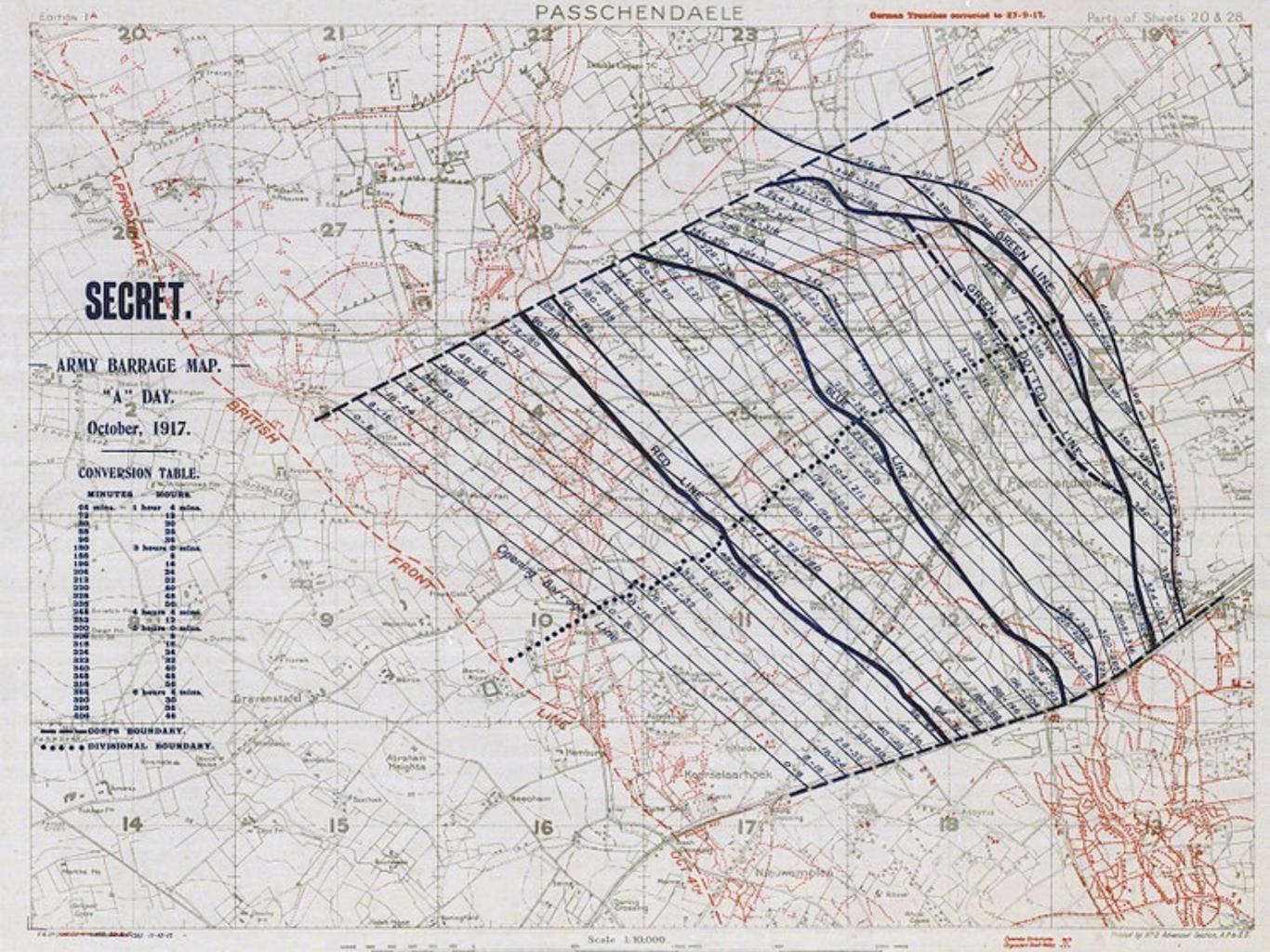
The optical war and cartographic vision



'World War I was ... the most optical war yet': Paul Saint-Amour







'We know by the singing of a shell when it is going to drop near us, when it is politic to duck and when one may treat the sound with contempt.

'We know when to ignore machine-gun and rifle bullets and when to take an interest in them. A steady phew-phew-phew means that they are not dangerously near. When on the other hand we get a sensation of whips being slashed in our ears we know that it is time to seek the embrace of Mother Earth.'

A.M. Burrage, War is war

'To no man does the earth mean so much as to the soldier. When he presses himself down upon her, long and powerfully, when he buries his face and his limbs deep in her from the fear of death by shell-fire, then she is his only friend, his brother, his mother.'

Erich Maria Remarque, All quiet on the Western Front

Slimescape

'War turns landscape into anti-landscape, and everything in that landscape into grotesque, broken, useless rubbish – including human limbs.'

Samuel Hynes, The soldiers' tale

"...trench mud was not only mud but was also compounded of organic wastes, industrial debris, iron scraps and even rotting flesh, all dissolving into what Sassoon calls "plastering slime"."

Santanu Das, Touch and intimacy in World War I literature

Cyborg nature



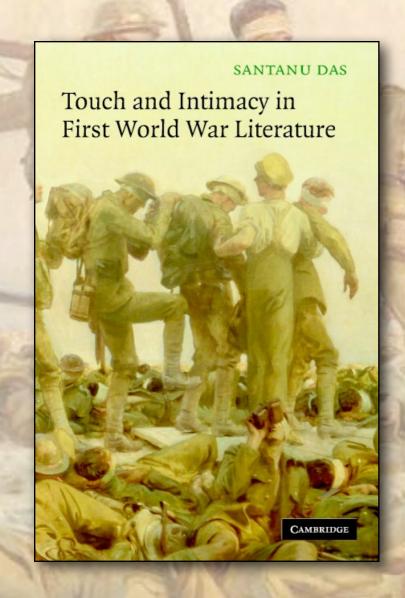
'... that mud which we cursed and in which we stuck and staggered, slipped and slid, tugging our boots out of it each time we made a fresh step. Jerry's shells showered us with filth, they disturbed the riddled and broken corpses, they reshredded the putrid flesh into scraps. It was easy to go "missing": if you got hit, the chances were you slipped into some yawning shell-hole full of greyly opaque water concealing unmentionable things and you drowned there.

'Wherever you went in this nightmare country you saw obscene things protruding from the mud. All around us lay the dead, both friend and foe, half in, half out of the water-logged shell holes. Their hands and boots stuck out at us from the mud. Their rotting faces started blindly at us from coverlets of mud; their decaying buttocks heaved themselves obscenely from the filth with which the shell bursts had smothered them... They had lain, many of them, for weeks and months; they would lie and rot and disintegrate foully into the muck until they were an inescapable part of it...

'I never grew accustomed to the all-pervading stench of decayed and decaying flesh, mingled with that of high explosive fumes that hung over miles and miles of what had been sweet countryside and now was one vast much heap of murder.'

Lt R.G. Dixon, Royal Garrison Artillery [in Nigel Steel and Peter Hart, Passchendaele: the sacrificial ground]

Haptic geographies



'phenomenological geography of the trenches – a landscape not understood in terms of maps, places and names, but geography as processes of cognition, as subjective and sensuous states of experience...'

'Amidst the dark, muddy, subterranean world of the trenches, the soldiers navigated space ... not through the safe distance of the gaze but rather through the clumsy immediacy of their bodies: "crawl" is a recurring verb in trench narratives, showing the shift from the visual to the tactile...

'[T]he visual topography of the everyday world ... was replaced by the haptic geography of the trenches and mud was a prime agent in this change. In an atmosphere of darkness, danger and uncertainty, sights, sounds and even smells are encountered as material presences against the flesh.'

'It is truly impossible for me to describe the wetness, the sliminess and the stickiness of the all-pervading mud. It clogged the fingers, filled the nails, smeared the face. ringed the mouth and clung to the stubbly beard and hair. The clothes were saturated with it, the mess-tins caked with it... Oh! the smell of it, the taste of it, the dampness of it and the filthiness of it.'

and the state of t

Private N.M. Ingram, 3rd Wellington Regiment [in Peter Barton, Passchendaele]



'The men slept in mud, washed in mud, ate mud, and dreamed mud. I had never before realized that so much discomfort and misery could be contained in those three little letters, MUD.'

Arthur Empey, Over the top

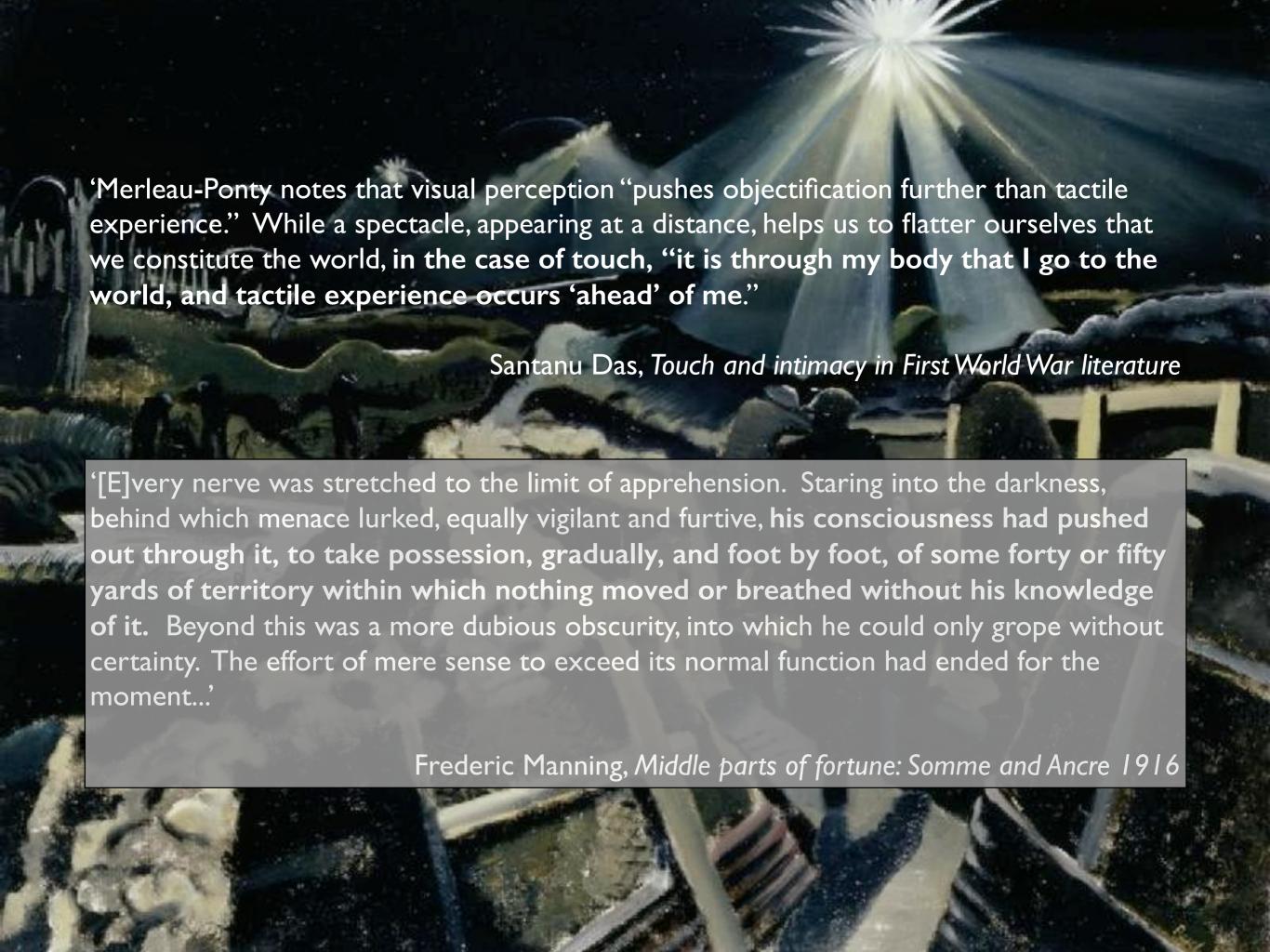
'We live in a world of Somme mud. We sleep in it, work in it, fight in it, wade in it and many of us die in it. We see it, feel it, eat it and curse it, but we can't escape it, not even by dying.'

Edward Lynch, Somme Mud



"... though we had studied the map so thoroughly beforehand, it was impossible to recognize anything in this chaos..."

2nd Lt Thomas Hope Floyd, 2/5 Lancashire Fusiliers, 31 July 1917 [in Peter Barton, Passchendaele]



A corporeal re-mapping

'I do a reverse journey by a quicker but more exposed route & I look for objects to help guide me. I see a foot and it keeps me for the next time but it is not there long.'

Private Aston, Ypres Salient, 1917

'New weapons technology catalysed a crisis in scale and redefined flesh and earth. But individuals reorganised the spaces they had to negotiate...; it was both impossible and essential to delimit the smooth space of the battlefield....

'Wrinkles in the texture of destruction become coordinates which allow the striation of smooth space.... Industrial weaponry obliterated one landscape: destruction was the starting-point for a new re-gridding.'

Becca Weir, "Degrees in nothingness": battlefield topography in the First World War', Critical Quarterly 49 (4) (2007) 40-55

'The land of rotting men...'

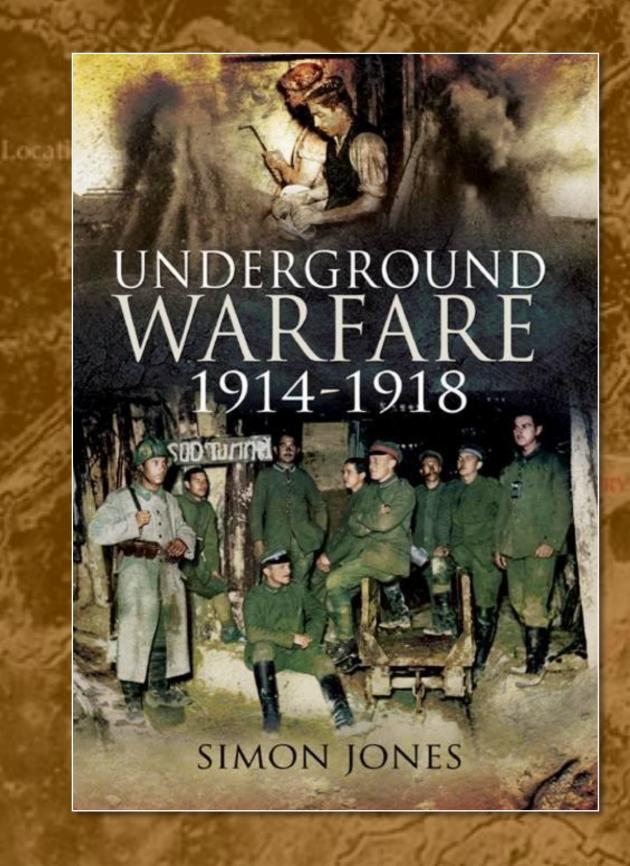
Edward Lynch, Somme Mud

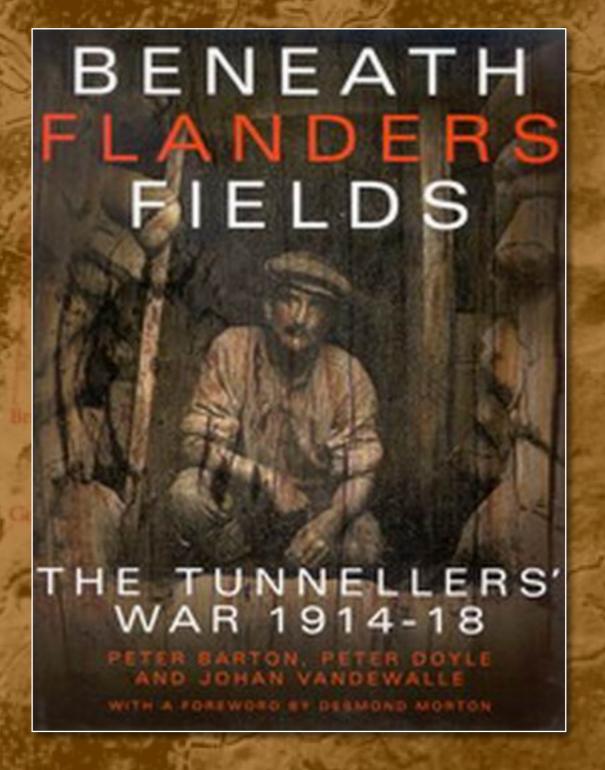
Corpography

'The whole zone was a corpse, and the mud itself mortified.' Edmund Blunden, Undertones of war



Trickster nature





Explosive nature





The French were the first to use toxic gas shells on a large scale but these were confined to tear gas.

The first lethal gas attack on the Western Front was launched by the German Army at Ypres on 22 April 1915. Thousands of cylinders of chlorine gas were opened, and 150 tons of chlorine billowed into a gas cloud nearly 6 km wide and 600-900 meters deep that was carried on the wind towards British and Canadian troops at 2-3 meters a second.

From 1916 gas of several different types (notably the still more deadly phosgene and mustard gas) was used in every engagement by both sides.

The chemical battlefield



By 1918 'all soldiers on the Western Front lived in an environment where gas was a daily fact of life...'

Tim Cook, No place to run



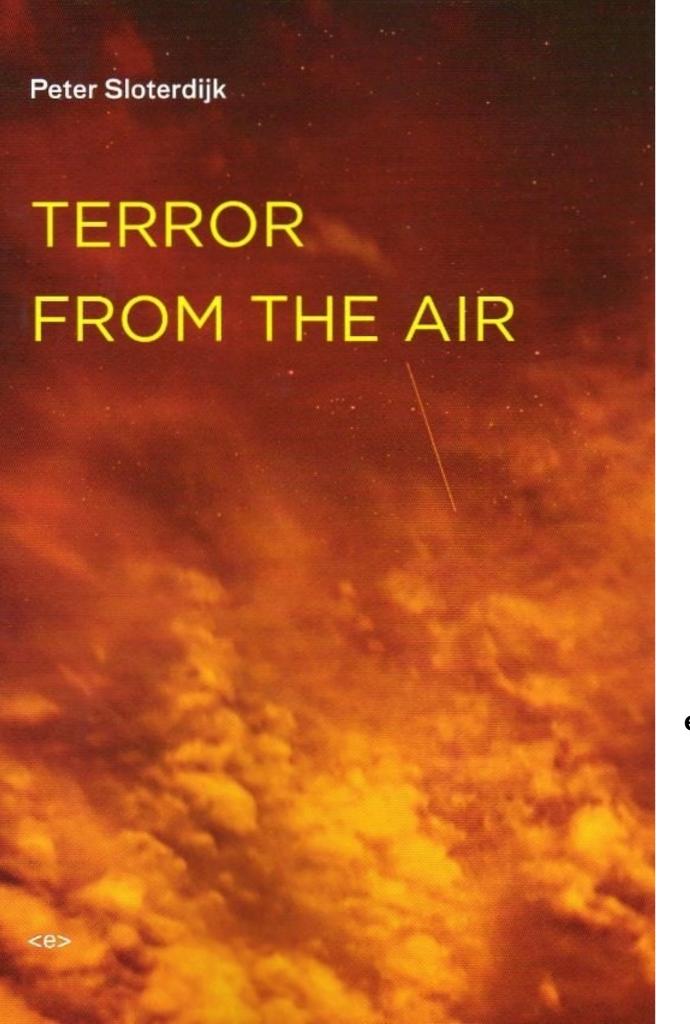
The chemical battlefield

'I pull my gas-mask over my face and it works, but this damned new gas held on for days; it lies on the ground, you don't know it's there, you can't see it or smell it, it clings to the grass like dew, and does its dreadful work.'

Leutnant Herbert Sulzbach

'The constant pollution of the battlefield by mustard gas, sometimes in small doses but often in pools of dangerous oily liquid, eventually deadened the olfactory sense that many soldiers used to distinguish between safe and dangerous areas. In many cases casualties resulted because soldiers could no longer smell the gas...'





'The explication of the environment'

'If an enemy's body can no longer be liquidated with direct hits, then the attack rid forced to make his continued existence impossible by his direct immersion in an unlivable milieu for a sufficiently long period of time.' (p. 16)

'Soldiers on both sides had rendered themselves so inaccessible to the bullets and explosives intended for them that the problem of atmospheric war could not but become pressing... What emerged from this was the phenomenon of a "second artillery": instead of aiming at the soldiers and their emplacements, it targeted the air surrounding the enemy body...' (p. 18)

"... 'this new "ecologized" war, this battle conducted in the atmospheric environment, was about conquering the respiratory "potentials" of hostile parties' (p. 20)



2: The Western Desert, 1942-1943



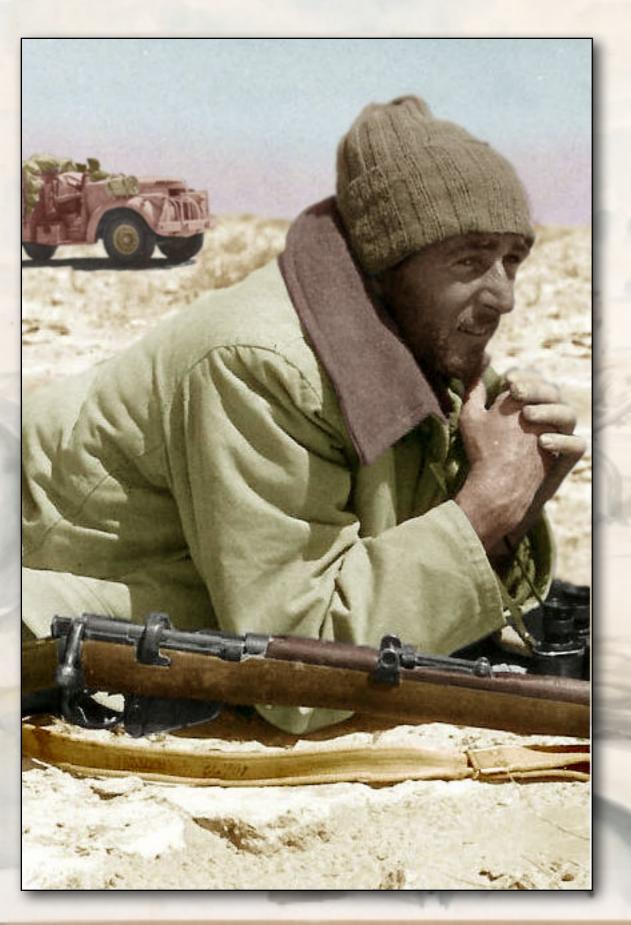
'The terrain in much of the northern part of the Western Desert, except for the salty dunes on the coast, consists of a plateau mostly covered by a gravel plain, over which vehicles can drive quite fast.

'Access to the plateau from the coast is guarded by a five hundred-foot escarpment which, except in a few places, cannot be climbed by vehicles, even tanks; hence the tactical importance of the passes...

'South of the plateau, the massive dunes of the ... Sand Seas extend down to Sudan, and what was then French Equatorial Africa and French West Africa. These sand seas are impassable to all but a handful of desert experts.'

Julian Thompson, Forgotten Voices: Desert Victory

'Desert warfare' I



'Never during our peace-time travels had we imagined that war could ever reach the enormous empty solitudes of the inner desert, walled off as it has always been by sheer distance, by lack of water, and by impassable seas of huge dunes. Little did we dream that any of the special equipment and technique we had evolved for very long distance travel, and for the navigation and quick survey of unmapped desert would ever be put to serious use. And I may add, without unfair criticism, that the army authorities shared in this lack of second-sight.

'Our army knew nothing either of the difficulties or of the possibilities of operations in the vast dry hinterland....

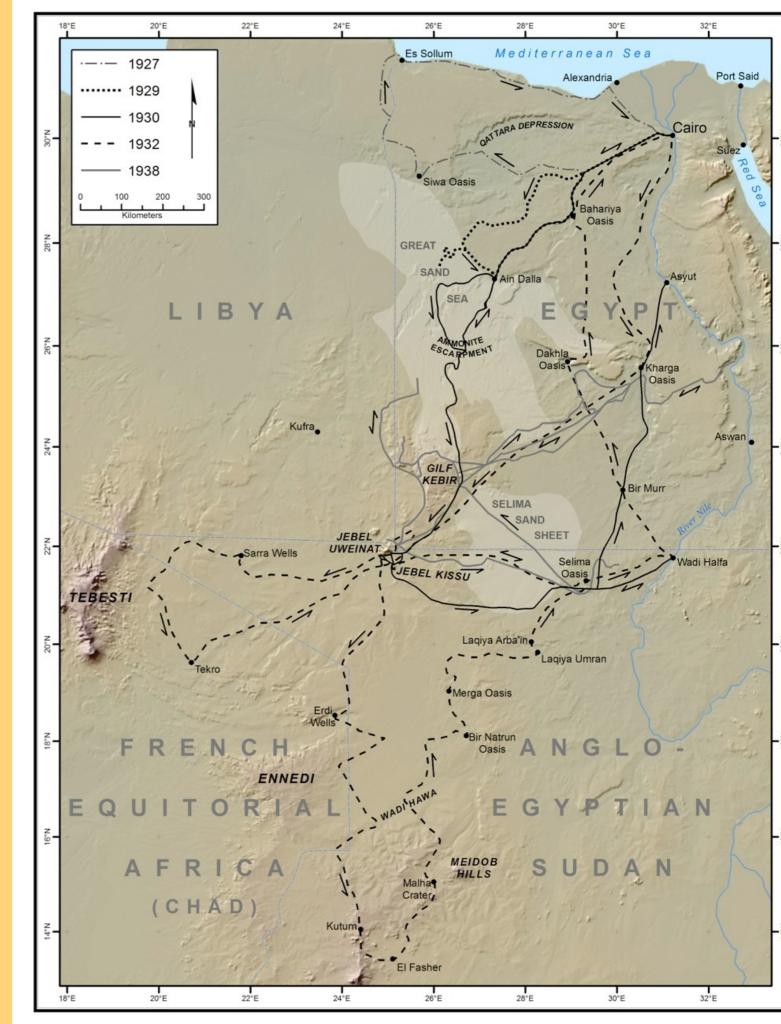
'[T]he little unit I commanded was operating in the far interior of the Libyan desert, as much if not more against an unknown geography as against the living enemy.'

R.A. Bagnold (1945)

'At first the dunes had seemed quite friendly, without evil intent, too big to bother about such a tiny invasion of their empire. They had let us crawl over them without much hindrance once we had got to know them better....

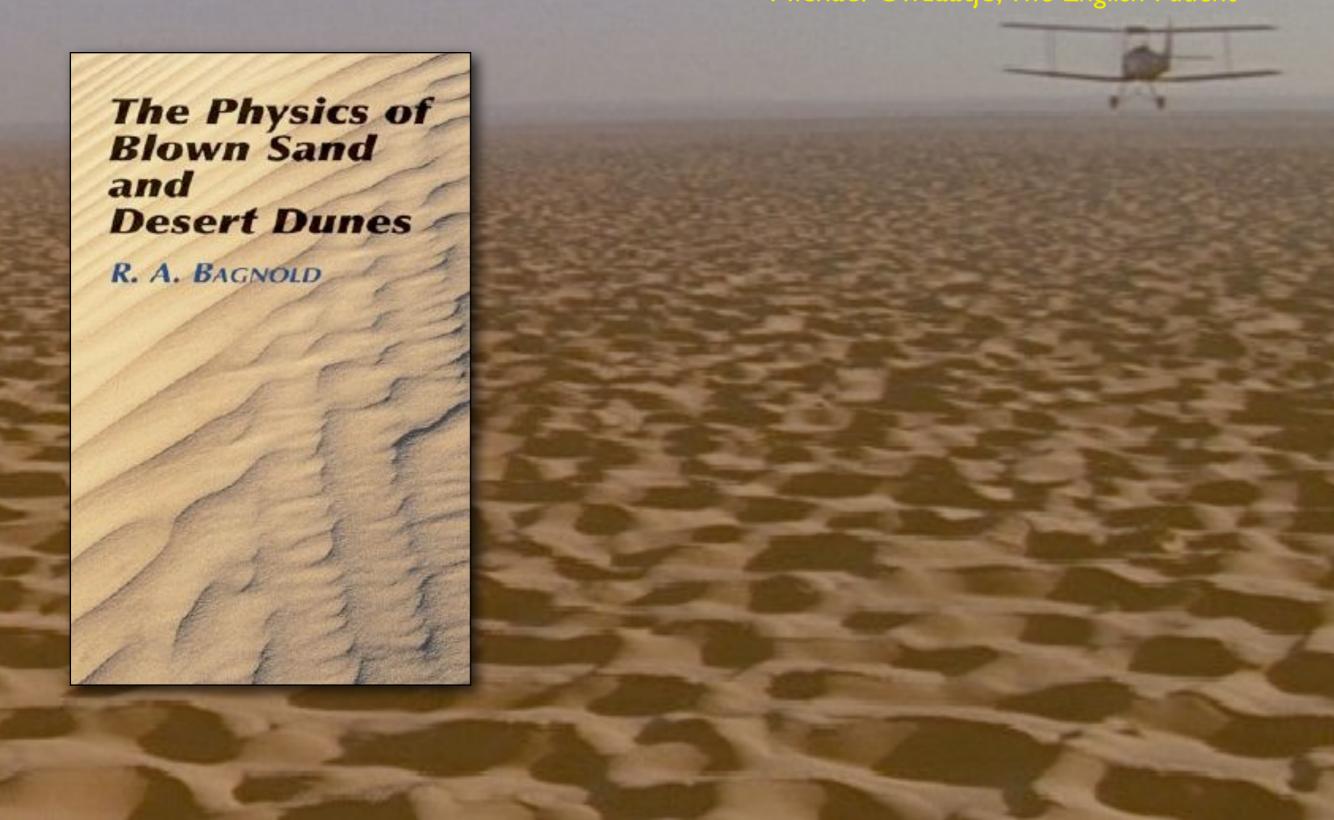
'The dunes had selected this of all places for their attack, the exact centre of a lifeless circle of country... [We crested the ridge], intent on nothing but escape from the fiery dunes... but for many miles farther we could see them still pursuing us in long tongues of gold, dodging between the purple hills, keeping abreast of us like a pack of wolves...'

R.A. Bagnold, Libyan Sands (1935)

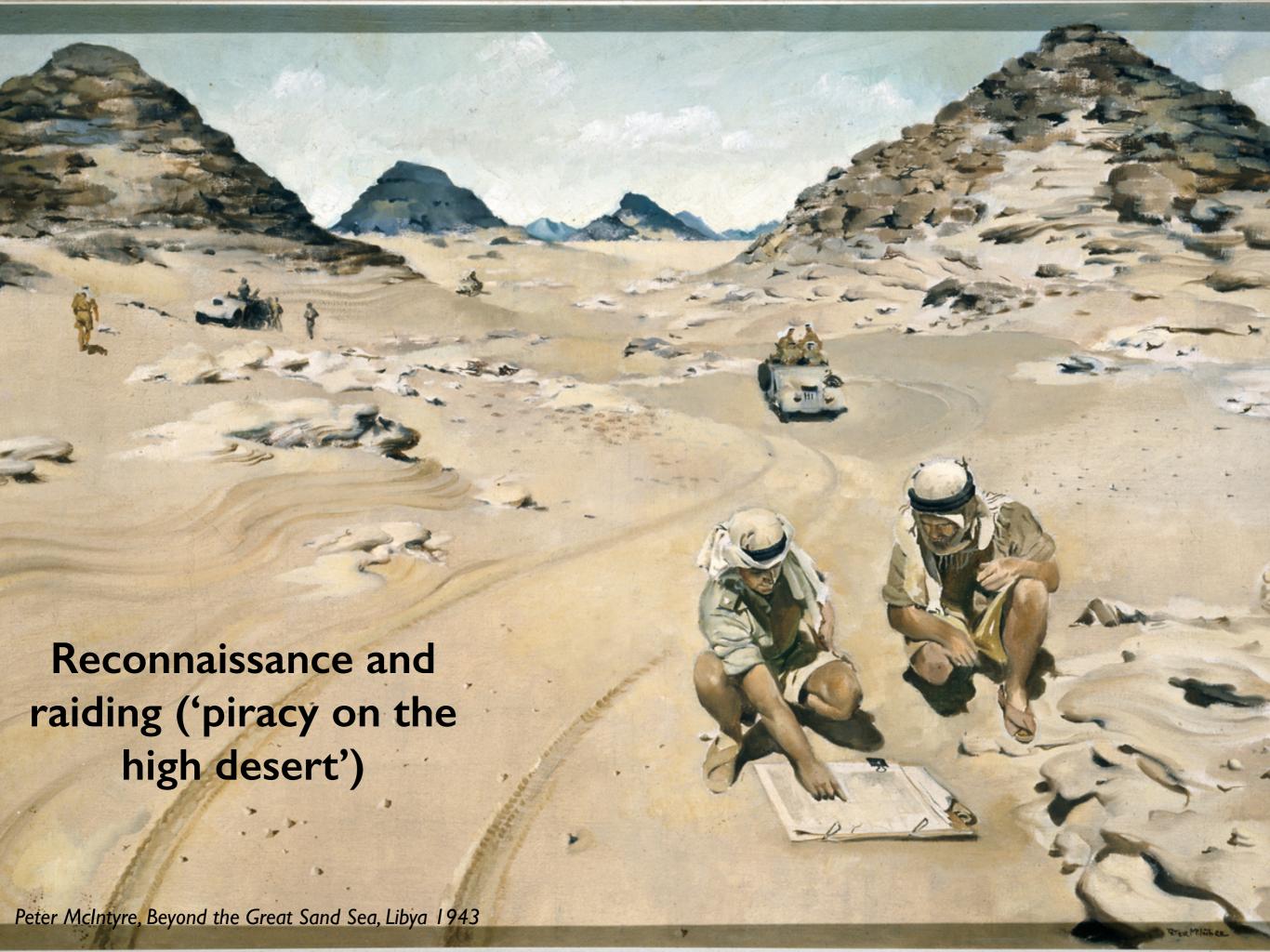


"We forgave Bagnold everything for the way he wrote about dunes. 'The grooves and the corrugated sand resemble the hollow of the roof of a dog's mouth.' That was Bagnold, a man who would put his inquiring hand into the jaws of a dog."

Michael Ondaatje, The English Patient



LIBYAN DESERT ROUTES OF THE L.R.D.G. 1940-41: Map to accompany the paper by Brigadier R.A. Bagnold - Established roads ----- Railways Law areas Scale 1:10 000 000 -----Established desert tracks 100 Miles 200 San I seas L.R.D.G. and Convoy routes 30° 10° 20° \mathcal{N} R TUNISIA Zuara Benghazi ow Sidi Barrani Erg Alexandria Oriental TAN En Nofilia 30° El Agheila Marada F! Polignac Mau el Chebir El Gatrun Kufra " Oasia Djado * · Lagiya D nisinga Kebir Erdi-Ma Bir en Netrun



'The patrols worked by themselves, hundreds of miles from help. They seemed to the enemy to appear from nowhere, as if out of the fourth dimension, which, in a way, the great empty desert was. The Sand Sea route became our secret highway...'

Major R.A. Bagnold, LRDG

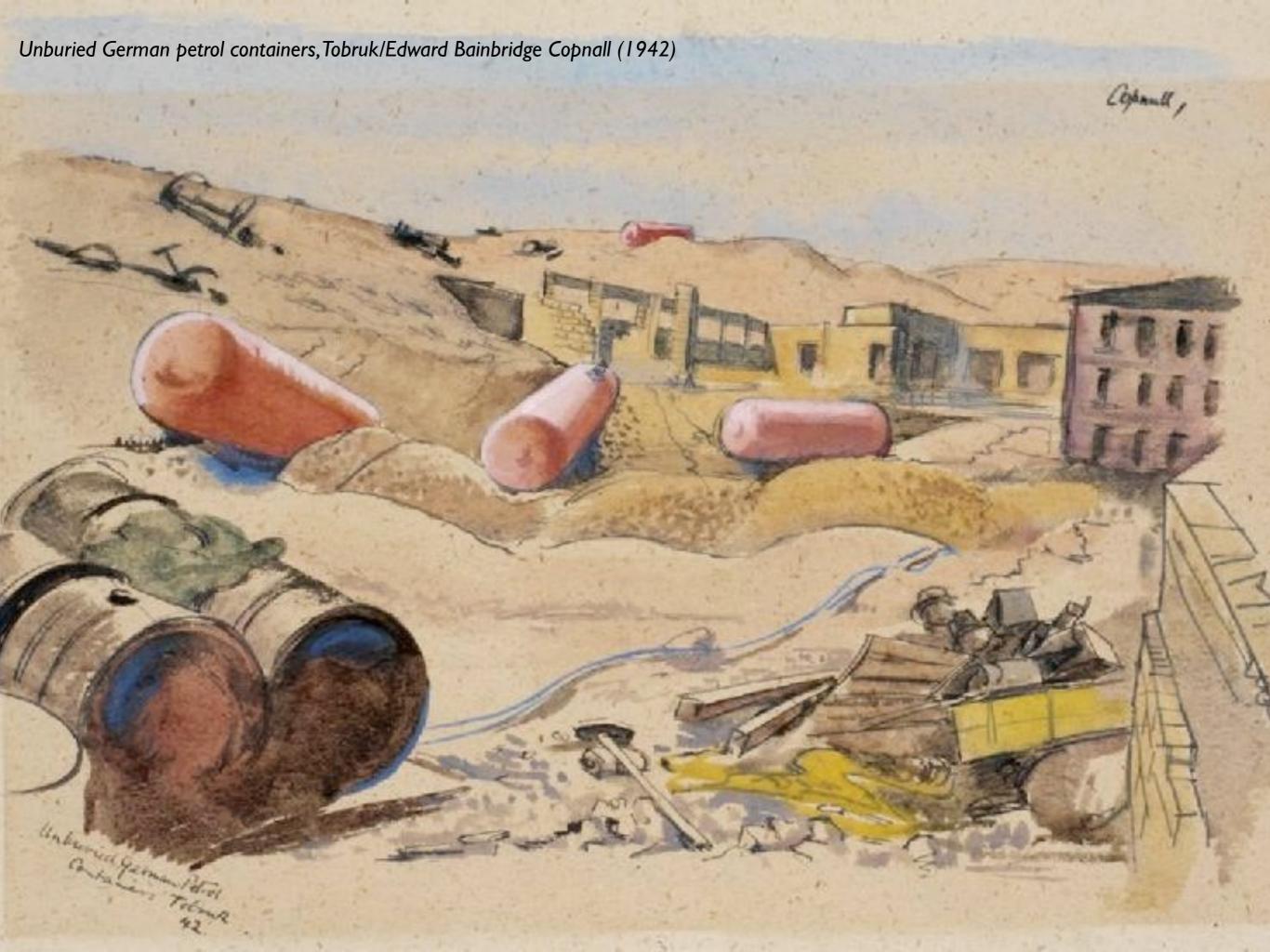
'We were working with excellent men, in a free atmosphere with complete mastery of the terrain.... We never relied on maps – they were useless. We used a piece of paper, worked out our longitude and latitude within a mile or two, and fixed it exactly at night by star sights, using a theodolite....

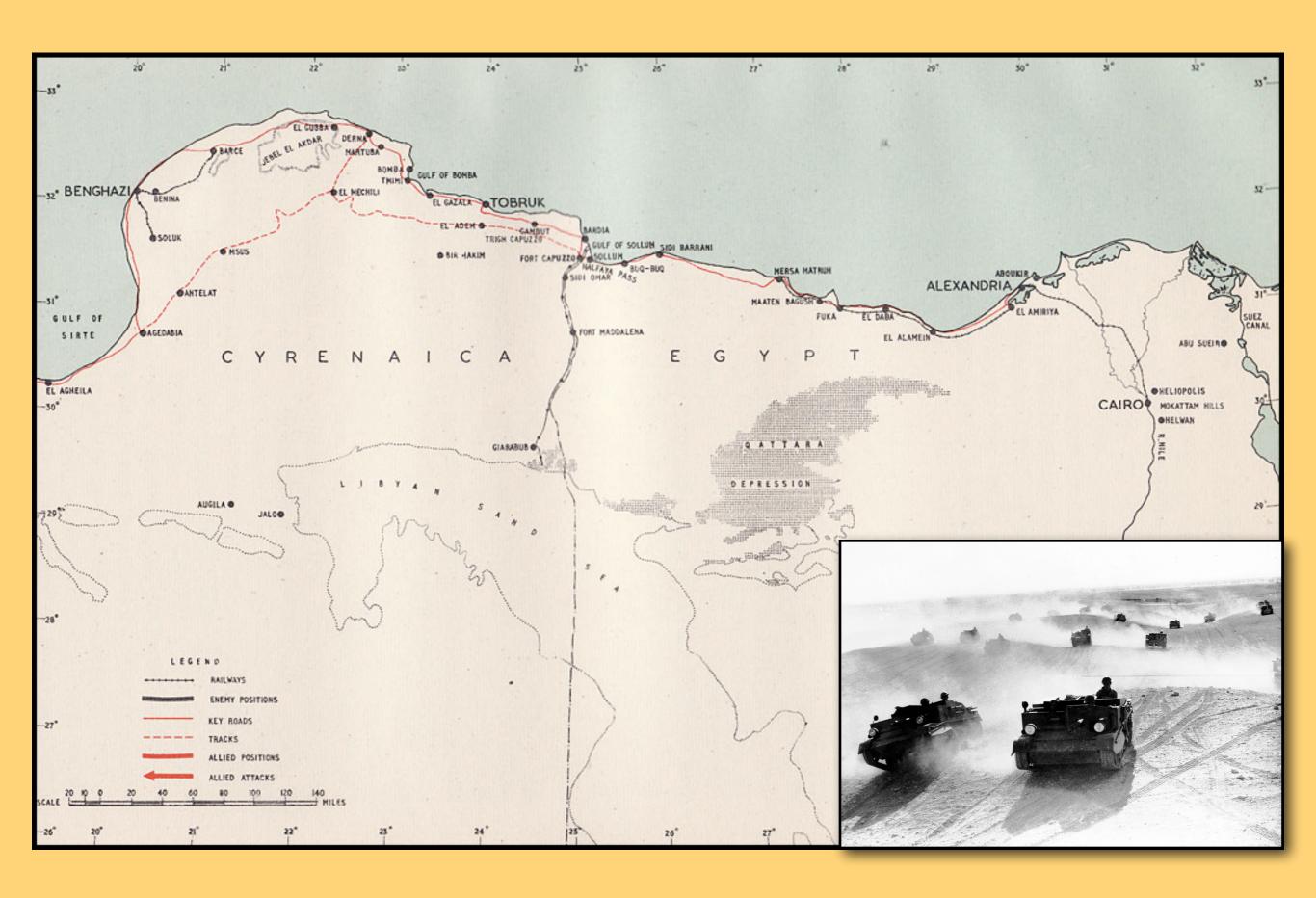
'As we got more experienced we began to know exactly what each sort of sand would do to us, whether it was good going, whether we would get stuck, whether we would have a difficult time. Sometimes we went for miles through rocky country where you couldn't move more than ten miles in a day. At other times, on beautiful flat desert, you could drive for two hundred miles at forty miles an hour.'

Captain David Lloyd Owen, LRDG









'Of all theatres of operations, it was probably in North Africa that the war took on its most advanced form. The protagonists on both sides were fully motorised formations, for whose employment the flat and obstruction-free desert offered hitherto undreamed-of possibilities... It was the only theatre where the pure tank battle between major formations was fought.'

Field Marshal Irwin Rommel, 'Rules of desert warfare'



'The Western Desert appeared to open up a vast canvas over which tanks, leviathans of the battlefield, could race, sleek as frigates or potent as ships of the line. Pure warfare where the featureless desert formed an inland sea...'

John Sadler, Desert Rats



'We moved off, and henceforth travelled, not by road, but by desert tracks. These tracks run straight across the desert, since there never were any obstacles to make them wind. A track is usually a wide ribbon of tyre marks, sometimes a quarter of a mile in breadth. ... The passage of many vehicles over sand scores it and ridges it, till progress is a continual slithering and jarring in and out of other people's tracks. In addition, the desert is stony country, hard on the springs of vehicles. Since the centre of the track soon wears down to stone, and becomes intolerable for driving, vehicles tend to be always making new tracks for themselves along the outer edges of the existing tracks. Hence the prodigious width of the main desert tracks. In appearance such a track is like a hundred sandy, deep-rutted cart-tracks laid side by side—all the ruts criss-crossing. It runs straight across the desert, linking the two horizons…'



'The only thing I recall of our journey, next day, to the front line, is a halt at an immense track-junction in the desert, and reading on a signboard the startling name KNIGHTSBRIDGE. Later I found that the Libyan desert had its Piccadilly, its Oxford Circus, its Leicester Square and its Hyde Park Corner—most of them lonely, cairn-marked cross-roads where no traffic ever roared except the occasional dusty desert truck.

'Imagine: —A single wooden signboard with crude lettering, PICCADILLY CIRCUS: and nothing else at all—round the grooved wheel-ruts, round the up-ended barrel or the dozen cairns of brown stones that mark the place, the lone and level sands stretch far away. You stand by your truck, in the shadow of the sign-board, and you are wrapped entirely in the everlasting silence of the sands. Piccadilly Circus. Not a movement anywhere under the blue bowl of the sky. The bare brown desert is still and empty, to the horizon.'

Dan Bilany, The trap

We have seen sand frothing like the sea
About our wheels, and in our wake
Clouds rolling yellow and opaque.
Thick-smoking from the ground;
Wrapped in the dust from sun and sky
Without a mark to guide them by
Men drove along unseeing in the cloud,
Peering to find a track, to find a way,
With eyes stung red, clown-faces coated grey.
Then with sore lips we cursed the sand,
Cursed this sullen gritty land
— Cursed and dragged on our blind and clogging way.

'We have felt the fevered Khamsin blow
Which whips the desert into sting and spite
Of dry-sand driving rain (the only rain
The parched and dusty sand-lands know,
The hot dry driven sand): the desert floor
Whipped by the wind drives needles in the air
Which pricked our eyelids blind; and in a night,
Sifting the drifting sandhills grain by grain,
Covers our shallow tracks, our laboured road,
Makes false the maps we made with such slow care.'

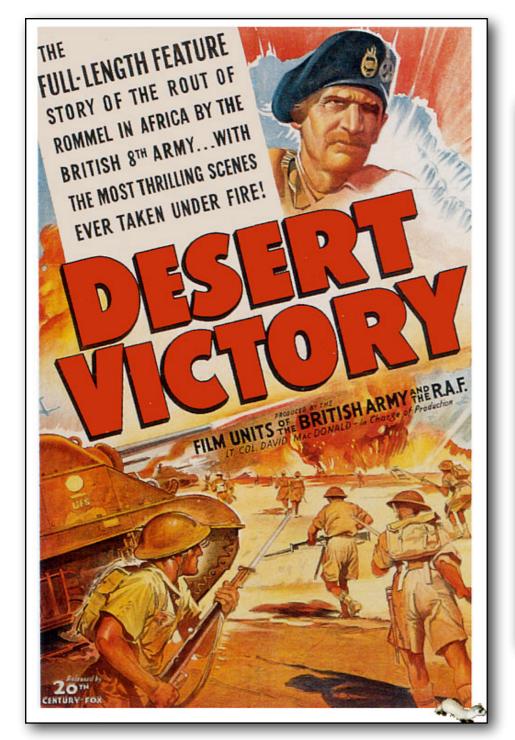
John Jarmain, Sand

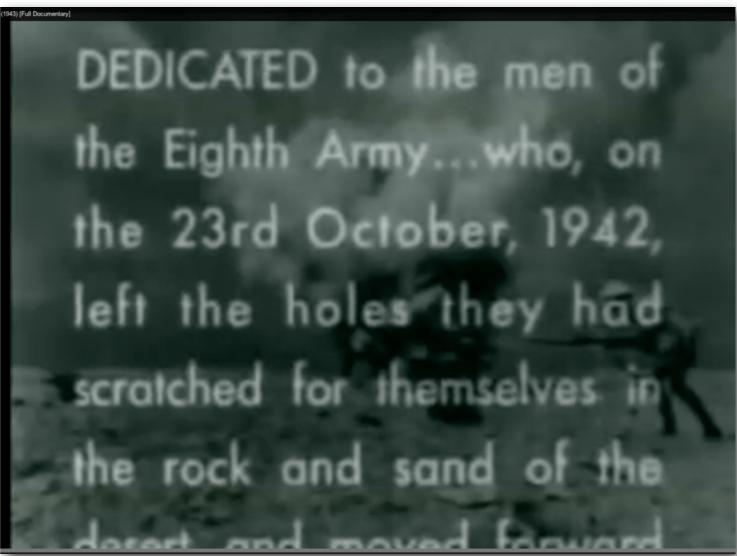
'The desert, omnipresent, so saturates consciousness that it makes the mind as sterile as itself. It's only now you realise how much you normally live through the senses. Here there's nothing for them ...'

'The view from a moving tank is like that in a camera obscura or a silent film—in that since the engine drowns all other noises except explosions, the whole world moves silently. Men shout, vehicles move, aeroplanes fly over, and all soundlessly: the noise of the tank being continuous, perhaps for hours on end, the effect is of silence....

'I think it may have been the fact that for so much of the time I saw it without hearing it, which led me to feel that country into which we were now moving as an illimitably strange land, quite unrelated to real life, like the scenes in *The Cabinet of Doctor Caligari*.'

Keith Douglas, From Alamein to Zem Zem





'The Western Desert is a place fit only for war. Thousands of square miles are nothing but sand and stone. A compass is as necessary, once off the road, as it is to a sailor at sea. Water doesn't exist until you bore deep into the earth. You bath in your shaving mug. Flies have the tenacity of bulldogs. Bruises readily turn to desert sores...'

(J.L. Hodson, Desert Victory, 1943; dir. Roy Boulting/David MacDonald)

Jocelyn Brooke, 'Landscape near Tobruk' (1942) 'This land was made for War. As glass Resists the bite of vitriol, so this hard And calcined earth rejects
The battle's hot, corrosive impact. Here Is no nubile, girlish land, no green And virginal countryside for War
To violate. This land is hard,
Inviolable, the battle's aftermath
Presents no ravaged and emotive scene,
No landscape à la Goya.....all
The rusted and angular detritus
Of war, seem scarcely to impinge
Upon the hard, resistant surface of
This lunar land'

Jocelyn Brooke, 'Landscape near Tobruk' (1942)

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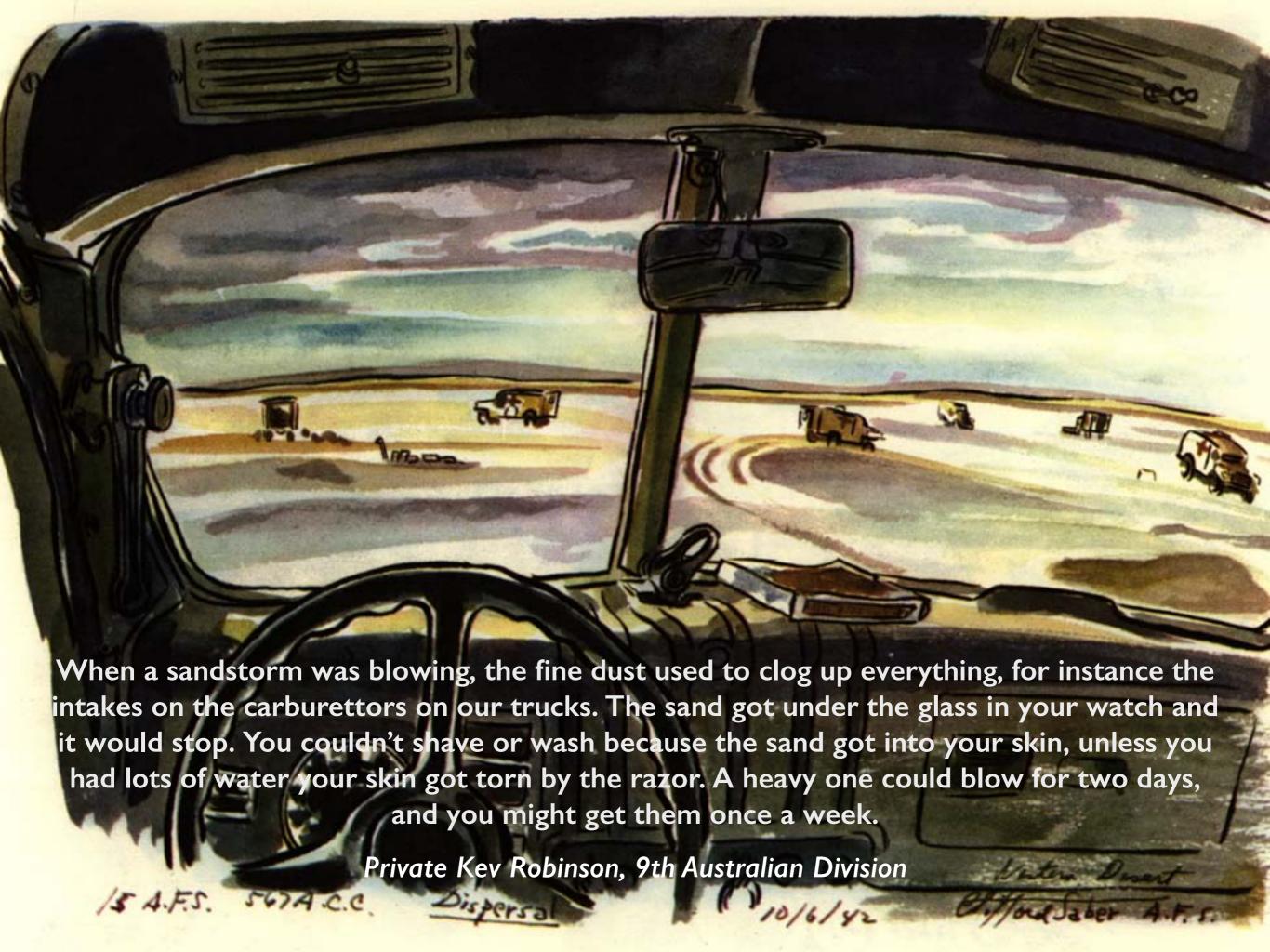
In the rock-strewn wadi merge
Like lizard or jerboa in the brown
And neutral ambient: stripped at gunsite,
Or splashing like glad beasts at sundown in
The brackish pool, their smooth
And lion-colored bodies seem
The indigenous fauna of an unexplored,
Unspoiled country: harmless, easy to trap,
And tender-fleshed – a hunter's prize.'



'Deserts are not made of [sand], but of dust which cakes with moisture: it gets in your ears and eye-corners, and chokes up your nostrils with a permanent lining...

'Such a storm often did not last long. Much more exasperating were the merely windy days, the restless days when there was always a fog of yellow dust hiding every section-post, dust in our hair, our food, our blankets, our water, our weapons. There was no keeping it out. When, in Mess, we had a dish of marmalade on the table, even though we kept it covered except when we were using it, it was soon completely coated with dust. Dust blew into every bivvy-hole, all the time. Maps, letters and papers, lying on shelves, vanished under a smooth layer of dust. Although each day I turned my sleeping-bag inside out, I always slept in dust. It caked to the body.'

Dan Bilany, The trap





Cyborg nature

'Like great lizards, the broken tracks of tanks were sprawled across the sand with their teeth gaping upward... The ground itself was criss-crossed a thousand times with the deep crenelated ruts of tanks and these, with indifference, had smashed rifles, bullets, machine-guns, tins, boxes, papers and even human beings, into the mud... Across this wilderness, made doubly a desert by the past week's fighting, the British tanks moved forward once more.'

Alan Moorehead, The desert war

But by a day's travelling you reach a new world the vegetation is of iron dead tanks, gun barrels split like celery the metal brambles have no flowers or berries and there are all sorts of manure, you can imagine the dead themselves, their boots, clothes and possessions clinging to the ground, a man with no head has a packet of chocolate and a souvenir of Tripoli.

Keith Douglas, Cairo Jag

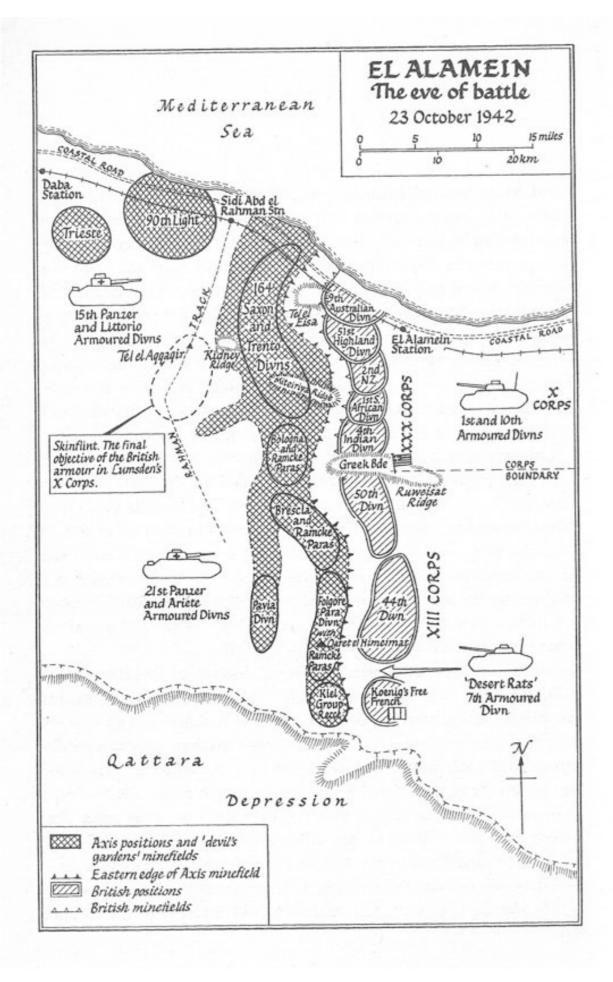
Cyborg nature

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At Gazala in February 1941 both sides sowed hundreds of thousands of mines across what was then the largest minefield ever laid.

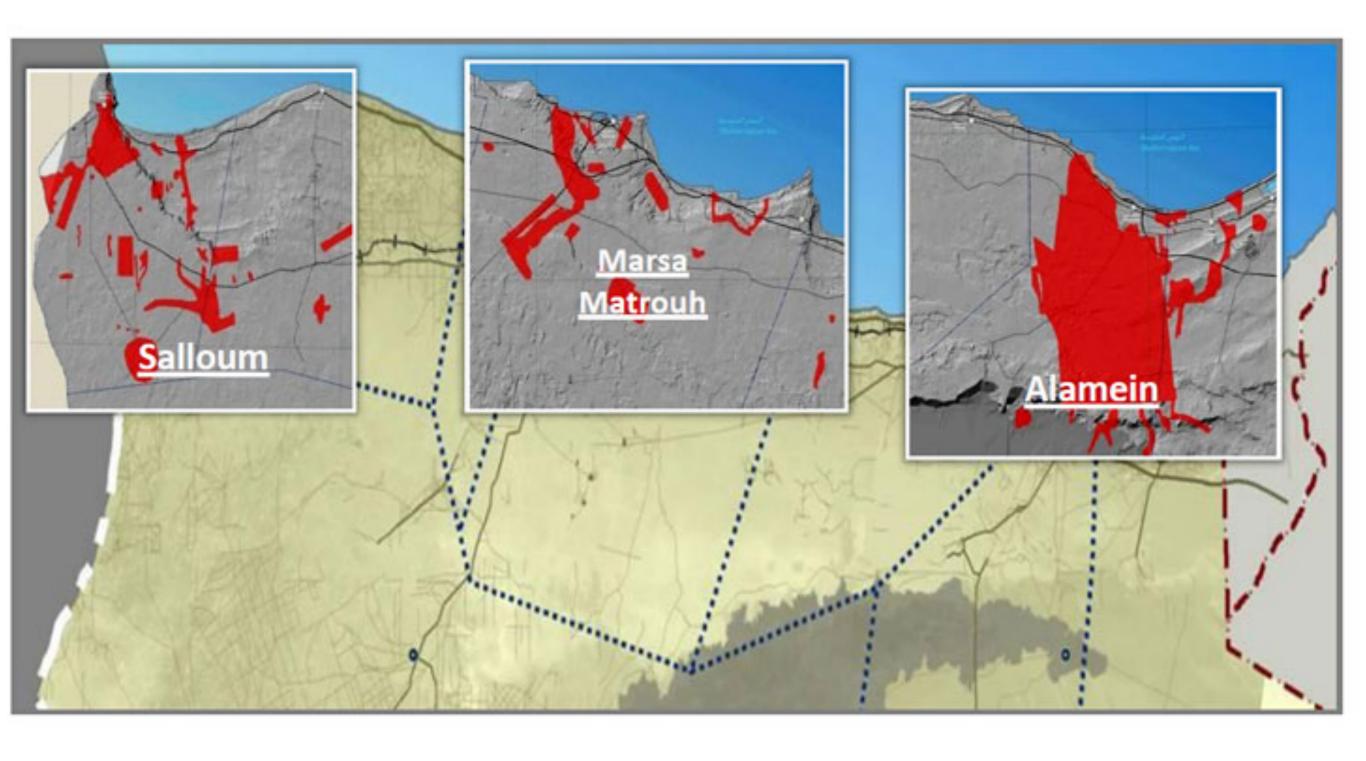
The minefields at El Alamein in July 1942 were even more extensive.

Out-armoured by the Allies, over a period of three months Rommel had 500, 000 mines (6 per cent of them antipersonnel mines) sowed in his 'Devil's Garden', which consisted of two minefields running north and south across the front, five miles deep. Many of the mines were 're-purposed' from abandoned British minefields.

'...the Engineers soon made it more complicated by laying minefields to the East as well as to the West: so that before I had been there a week, a brandnew minefield encircled our company front, and when we talked about minefields, we had to distinguish carefully between the one in the front and the one in the rear. This process went on all along the line, till the front line brigades were all enclosed in minefields to the right of them, minefields to the left of them, minefields behind them and minefields in front of them. The desert became explosive: driving one's truck was a nervous effort.'

Dan Bilany, The trap





'The more tankable the terrain, the more mines were needed': Mike Croll, Landmines in war and peace

The primary objective was not destruction – though mines accounted for 4 per cent of all personnel casualties and 20-30 per cent of all tank losses – but to slow the advance of the enemy.



Scorpion flail tanks were also used to explode mines but these proved largely unsuccessful

Panzer Key. Mobile Anti Tank Screen. MINEFIELDS :-PHASE, 1. PHASE, 2. PHASE. 3. British Forward Communications. Shrapnel Mine. Gun Positions. One Anti Tank & Two Machine Guns Artillery Barrage Zone. Dannert Wire. Scattered Mines British Forward Minefields.

Gapping and slow violence

The object of 'mine-clearing' was not to clear the minefield but to create gaps for infantry and tanks to advance across it.

Minefields were supposed to be charted in detail but the flux and drive of the desert war ensured that no reliable records survived

(In)visibility in the desert landscape

In the open spaces of the desert military formations were exposed to view: objects cast long shadows and movement raised clouds of dust.

But it was not always easy to determine what had been caught in the field of view:

'In the interior of the desert about ten kilometres from the coast, the vibration of the air makes accurate observations practically impossible for a distance of more than one kilometre. All objects at a distance of one kilometre and more appear to move, and it is scarcely possible to decide whether a dark spot on the horizon is an approaching motor vehicle or a destroyed vehicle. At still greater distances all contours become so blurred that one always thinks one is surrounded by a sheet of water....'

Major General Alfred Toppe, 'Desert warfare: German experiences in World War II'

'In the morning we watched what we thought were Mk IIIs and Mk IVs in the distance shimmering in the heat haze, looking like black beetles. You weren't always sure whether you were watching German tanks or ours; because of the heat haze, tanks were just black objects.'

Trooper David Brown, Royal Tank Regiment

Camouflage and the dialectics of desert vision





Tank as truck (left) and truck as tank (right)

'The camoufleurs had assessed the aerial geography of the battlefield and realised that the desert had obvious advantages for display, and therefore this weakness could be converted into a strength...The desert was transformed from landscape to a stage set... a place of multiple mirages.'

Isla Forsyth, From dazzle to the desert



'Reports from the war in the desert were coming in. There on the flat featureless background, concealment from the air was almost a impossibility. Vast armies of men and machines with their attendant litter, tracks, dust and shadows could not be hid; protection from air attack through dispersals became the rule, and apart from certain elementary measures of concealment, camouflage concentrated its attention on its other and more offensive purpose, sometimes known as Deception.'

Julian Trevelyan,'Camouflage' (1944)

3: Vietnam, 1962-1975

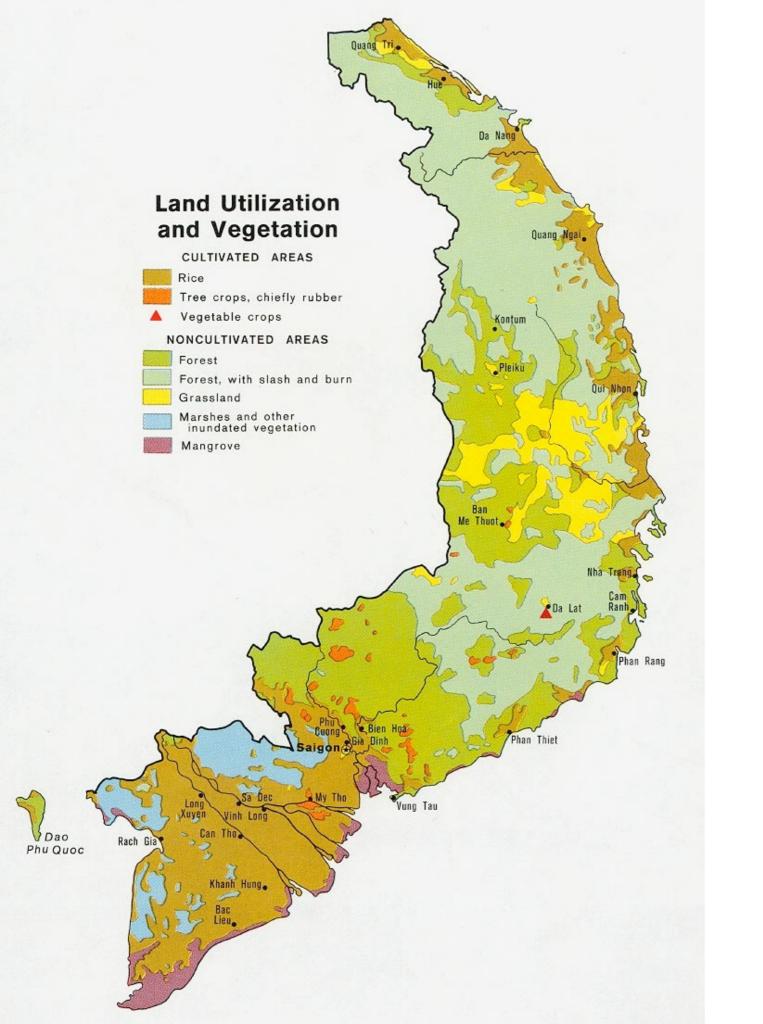


'Yes, they were in jungle now. Thick dripping jungle. Club moss fuzzing on bent branches, hard green bananas dangling from trees that canopied in lush sweeps of green, vaulted forest light in yellow-green and blue-green and olive-green and silver-green. It was jungle. Growth and decay and the smell of chlorophyll and jungle sounds and jungle depth. Soft, humming jungle. Everywhere, greenery deep in greenery.'

Tim O'Brien, Going after Cacciato

'After a while all that jungle green became as monotonous as the beige of the desert or the white of the Arctic.'

Phil Caputo, A rumor of war



Military Reason and the jungle

'Militant tropicality'

Genealogy

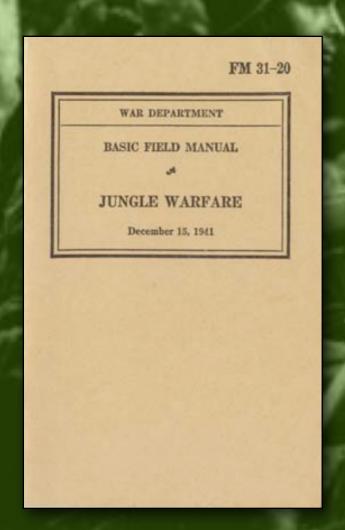
US in the Philippines (1898), Pacific and South East Asia (1941-1945), British in Malaya (1948-1960)

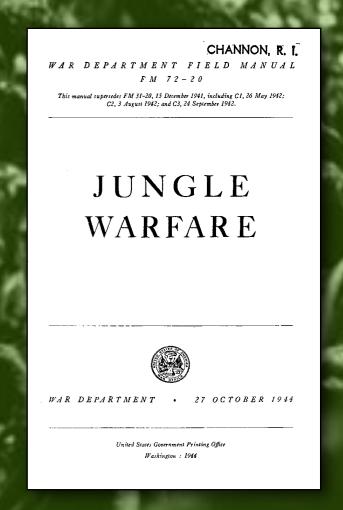
The Jungle Books

'Looking at the green immensity below, I could only conclude that those manuals had been written by men whose idea of a jungle was the Everglades National Park. There was nothing friendly about the Vietnamese bush; it was one of the last of the dark regions on earth...'

Phil Caputo, A rumor of war

I: Imaginative geographies: 'It's all in the mind'





'As in any area where physical hardship is the rule, there are accompanying psychological reactions to the jungle. These reactions take the form of magnifying the physical hardships and the inherent dangers of warfare. Limited visibility increases the feeling of insecurity, strange noises assume an increased importance, and men tend to become jumpy and panicky. The dull, shaded light and, in many areas at certain periods of the day, the gloomy, drifting mists of jungle areas have a morose and eerie effect which further adds to the feeling of insecurity.'

FM 72-20, Jungle warfare (US War Department, October 1944)

'Prevalent misconceptions

The soldier who is not familiar with the jungle will suffer from conditioned fears and apprehensions when faced with the prospect of living and fighting in a jungle environment. Popular representation of the jungle as being a veritable green hell of large trees and dense underbrush growing over vast expanses of flat, swampy ground and inhabited by thousands of animals, snakes, and insects which are hostile to man, cause this fear. Before such individuals even set foot in the jungle they are appalled at the prospect of doing so. Certainly the foreboding appearance of the jungle, the oppressive humidity and heat, the unfamiliar noises, and the abject feeling of loneliness that one feels when entering the jungle intensify the already existing fear of the unknown. It cannot be denied that the jungle presents some most unpleasant aspects. But the individual must, through systematic and thorough training and acclimation, learn to know the jungle for what it actually is and not for what it is supposed to be or what it might be. Once this knowledge is acquired, the soldier will respect the jungle, not fear it.'

DEPARTMENT OF THE ARMY FIELD MANUAL

OF JUNGLE
TRAINING
AND
OPERATIONS

DITC QUALITY INSPECTED 4

19961223 117

HEADQUARTERS, DEPARTMENT OF THE ARMY SEPTEMBER 1965

REPARTMENT OF THE ARMY SEPTEMBER 1965

FM 31-30, Jungle training and operations (US Army, September 1965)

2: 'The jungle can be your friend'

'In jungle warfare, the soldier often fights two enemies: man and nature. The elimination of nature as an enemy and the use of the jungle itself as an ally are training objectives fully as important as the elimination of the human enemy. The soldier must be trained not to fight the jungle; he must be capable of living successfully in it and making it work for him against the human enemy.'

FM 72-20

FM 31-30 (1965)

Minimisation of 'natural' dangers -

'Most animals in the jungle will not attack man unless they are frightened... The widespread terror of "the snake-infested jungle" prevalent in the minds of most peoples is an imaginary mental image. ... [T] the incidence of poisonous snakes is no higher than in some of the swamp areas of the Temperate Zone.'

- and maximization of the super-abundance of tropical nature: dozens of pages were devoted to living off and finding shelter in the jungle, with photographs of tangerines, mangoes, limes, bananas, papayas and avocados

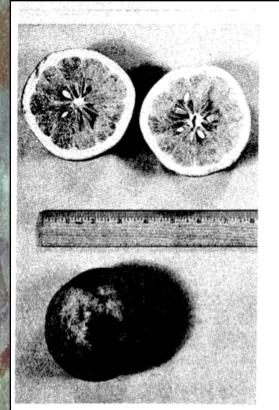


Figure 43. Wild sweet orange. This fruit, in common with most wild fruits, has a thick skin.

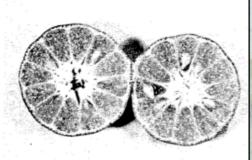




Figure 44. Tangerine.

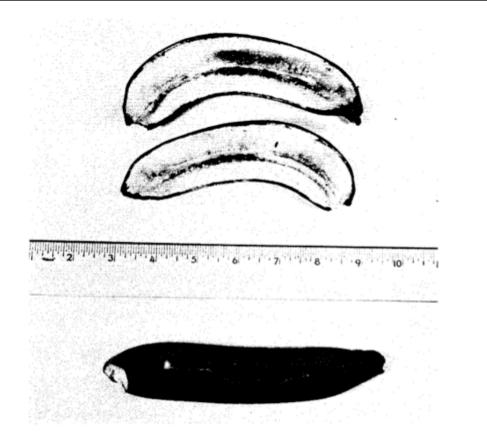
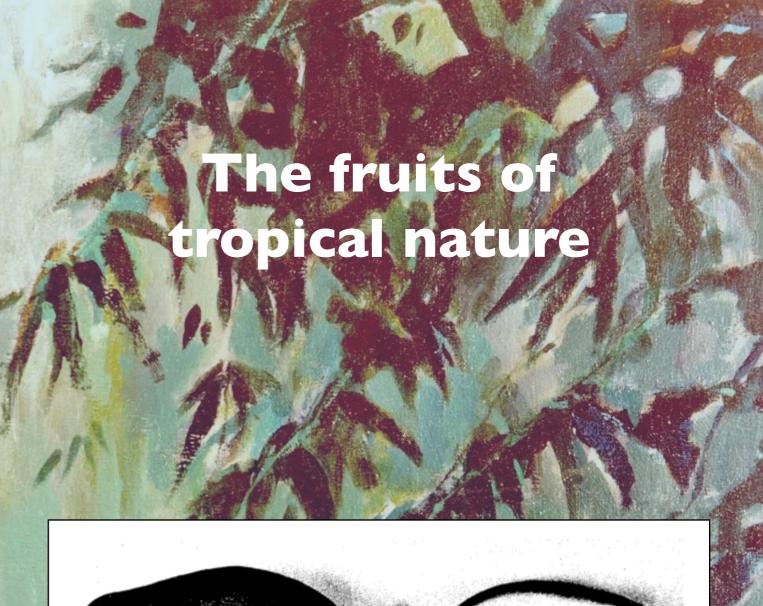
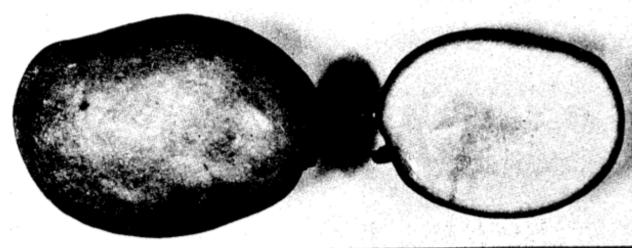


Figure 51. Apple banana. This variety of the specie is quite delicious. The specimen shown is unusually large.





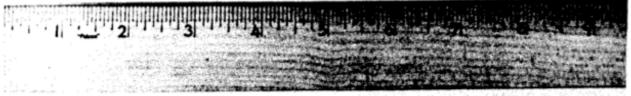


Figure 54. The mango.



3: Disciplining nature: the imposition of military reason

FM 31-35

DEPARTMENT OF THE ARMY FIELD MANUAL

JUNGLE OPERATIONS



HEADQUARTERS, DEPARTMENT OF THE ARMY SEPTEMBER 1969

TAGO 6271A

By 1969 the fruits of the jungle have disappeared.

After a discussion of different jungle environments, including 'Oriental jungles', the discussion turns to weapons, armour and artillery, air support and chemical and biological warfare, so that 'nature' is militarised and subjected to military (re)ordering much earlier

Emphasis is on 'modification' of Standard Operating Procedures, which was also present in FM 31-30, and a move away from the tangle of the jungle – Tim O'Brien's 'botanist's madhouse' – to the superimposition of ordered combat geometries.

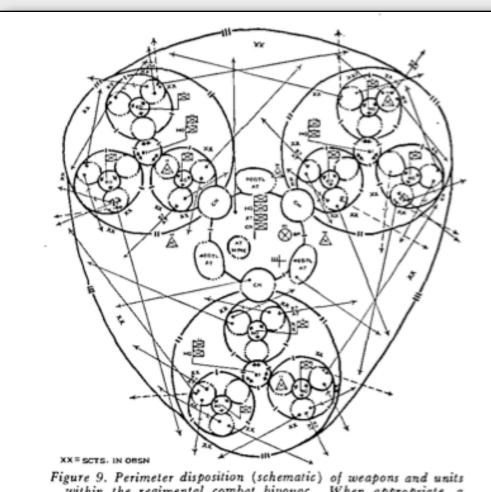


Figure 9. Perimeter disposition (schematic) of weapons and units within the regimental combat bivouac. When appropriate, a company may establish a single perimeter defense, rather than a perimeter defense for each platoon.

FM 31-30 (1965)

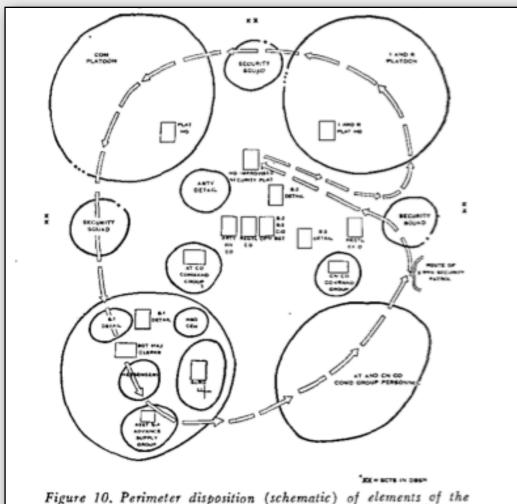
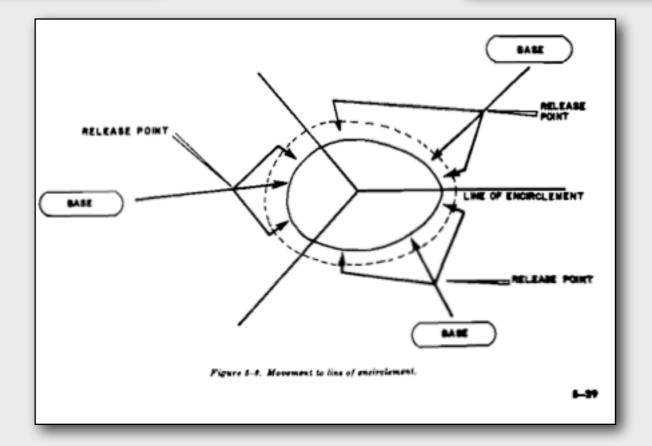
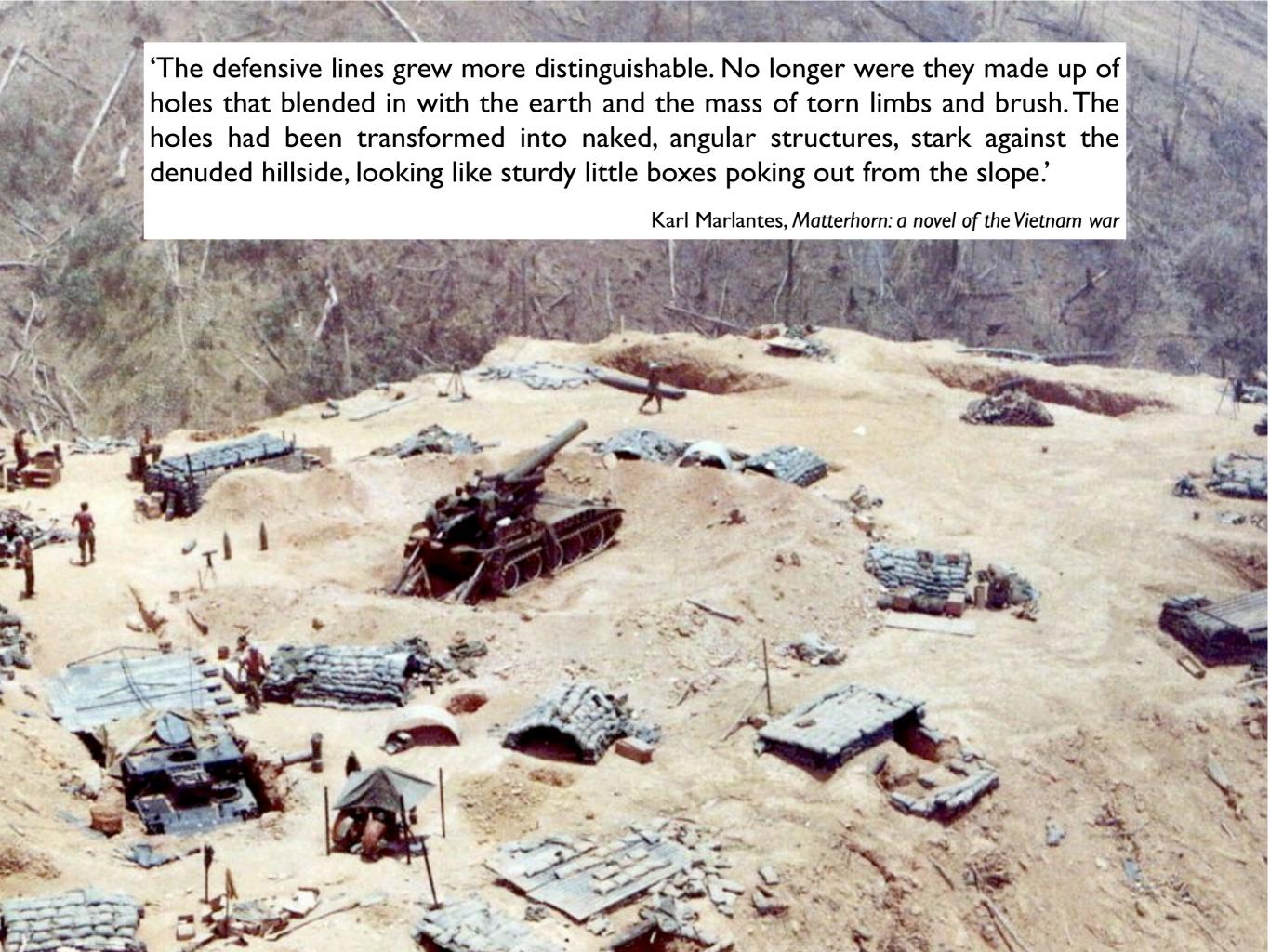


Figure 10. Perimeter disposition (schematic) of elements of the regimental command post. This disposition is applicable, in part, to battalion command posts.



FM 31-35 (1969)

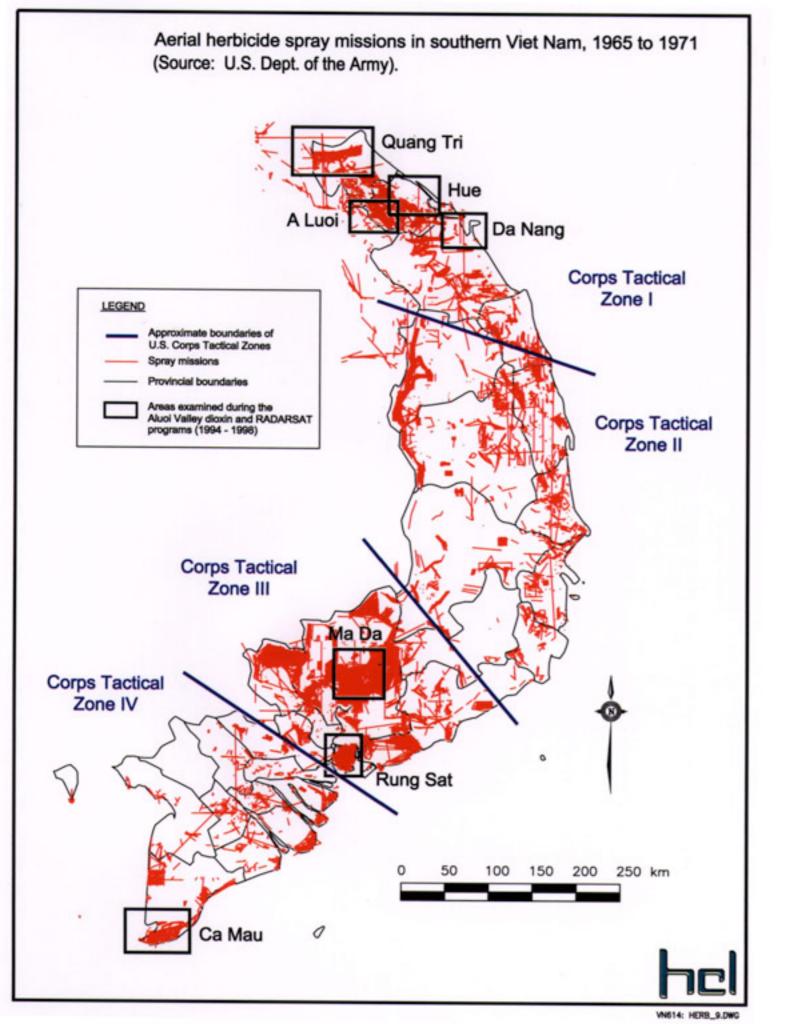




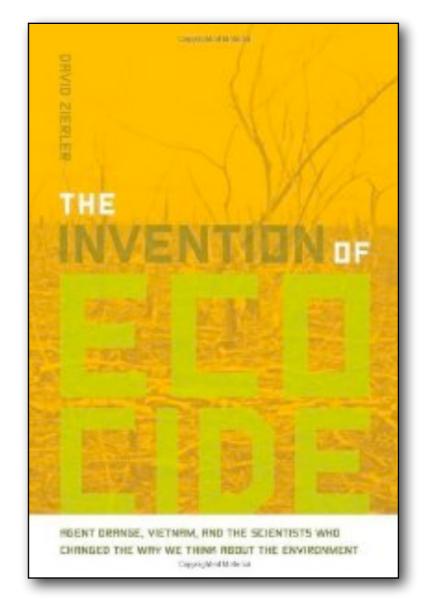


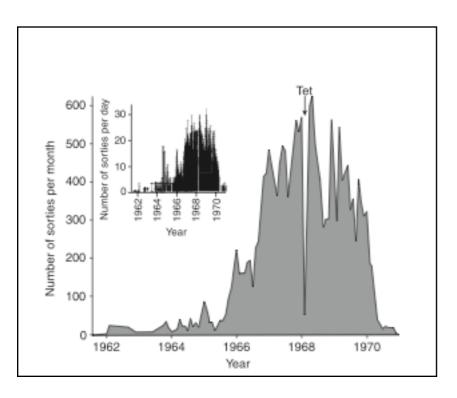












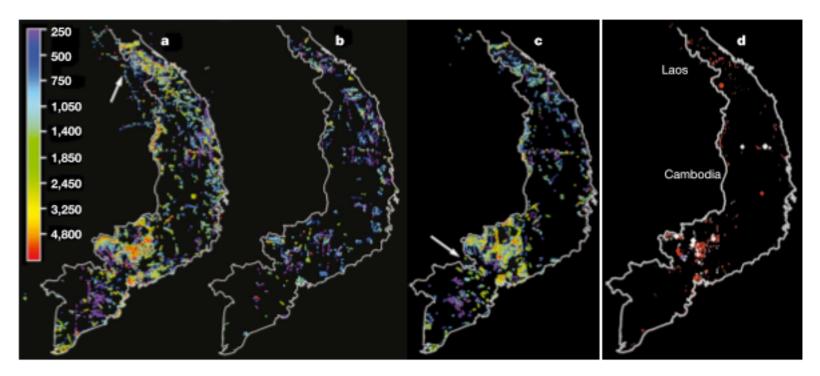
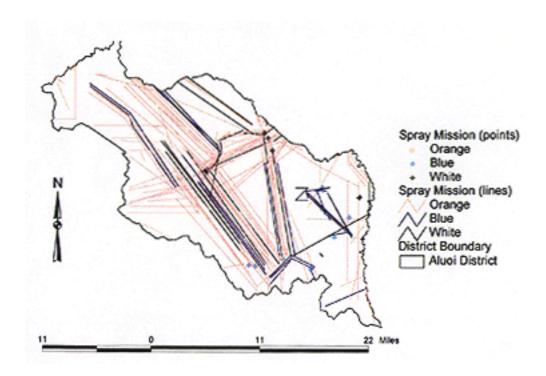


Figure 3 Volumes of herbicide sprayed. **a**, **b** and **c** represent known volumes of Agents Orange, White and Blue, respectively, sprayed by US military forces in RVN, 1961–1971. Volumes are calculated for individual grids spaced at 0.01 degrees (~1.2 km²), that divide up Vietnam in a geographic information system developed by us⁴⁵. Colours in **a**, **b** and **c** correspond to volumes as shown in key. Arrows in **a** and **c** point to missions in Laos

and in the Parrot's Beak region of Cambodia, respectively. **d**, Grids sprayed with volumes greater than 4,800 l (about 10% of total), with marker size increasing in proportion to volume and colours corresponding to herbicide codenames. All herbicides containing 2,4,5-T are represented by orange markers.



Spray missions over A Shau Valley

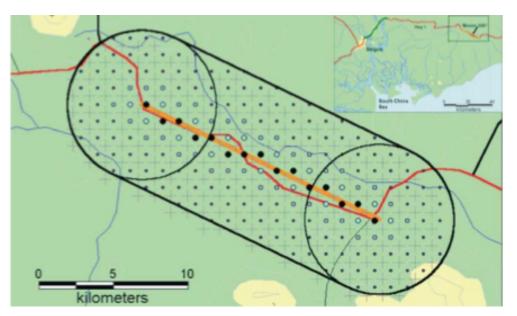
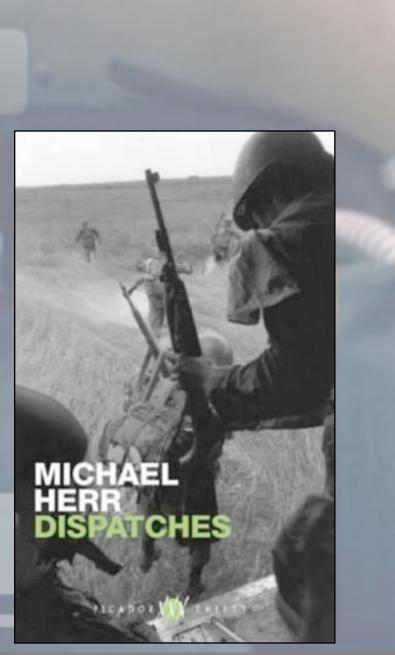
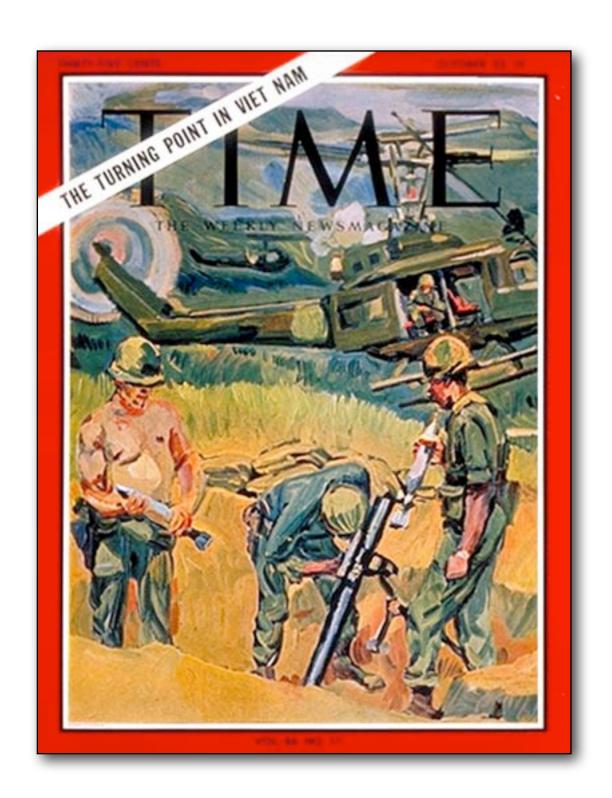


Figure 1. Region of Vietnam approximately 80 km east of Saigon (see inset), showing flight path of Ranch Hand mission no. 3087 flown on May 11, 1967 (straight orange line) along Highway 1 (jagged red line). GIS grid system is shown as horizontal and vertical lines spaced 0.01° apart. Contained within a 5 km buffer drawn around the flight path (heavy black line) are the centroids of the 210 cells that fell within 5 km of the flight path, with size and color indicating proximity to defoliation flight path: large black circles = 0.5 km or less; larger squares = 0.5-1 km; small shaded squares = 1-2 km; small black circles = 2-5 km. Each of the two large circles has a radius of 5 km about an end point of the flight path and encloses 65 of the 210 centroids. Failure to account for flight path continuity by counting "hits" only from the flight path's end points would produce an undercount of 210-130 = 80 exposed cells, or 38%.

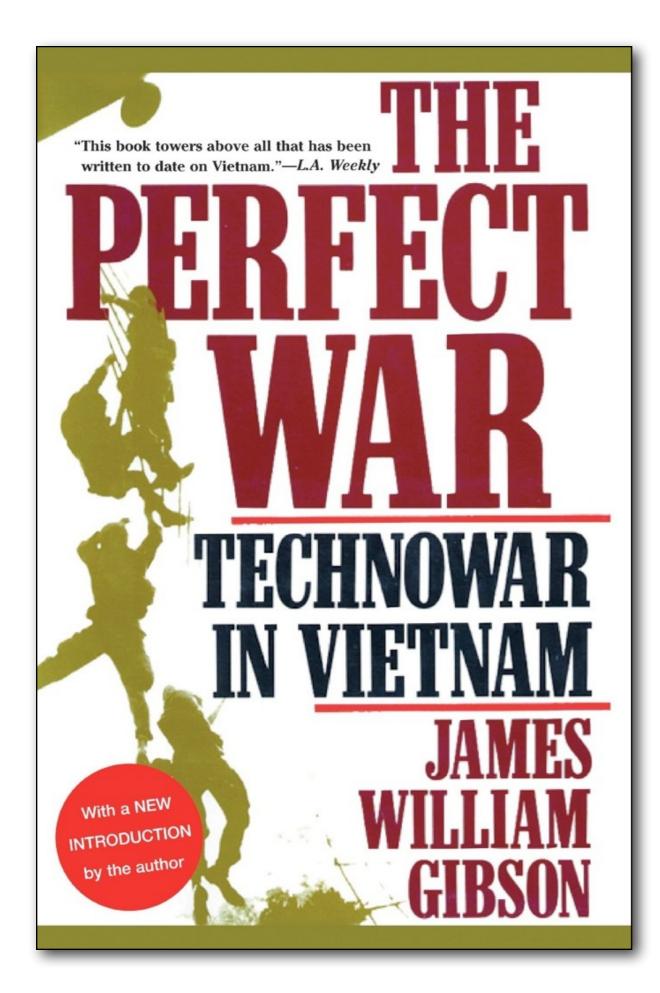


'Flying over jungle was almost pure pleasure, doing it on foot was nearly all pain...
The ground was always in play, always being swept.
Under the ground was his, above it was ours. We had the air.'



'South Vietnam: a new kind of war' Time, 22 October 1965

'The Viet-Cong's once cocky hunters have become the cowering hunted as the cutting edge of US fire power slashes into the thickets of Communist strength.'



This may have been 'technowar' as far as McNamara's Pentagon were concerned, but it did not signal the triumph of science and technology over 'nature'

'... an omniscient American war machine was [not] bearing down on a transparent, knowable or compliant battlefield.'

Dan Clayton, 'Militant tropicality', Transactions of the Institute of British Geographers 38 (2013) 180-192



"Of course, it's not as if bushes were innocent ... sit on top of a bunker, stare at the tree line for a while. You have to concentrate because if you blink or look away for even a moment you might miss it, they aren't dumb despite what you may think, they're clever enough to take only an inch or two at a time. The movement is slow but inexorable, irresistible, maybe finally unstoppable. A serious matter."

"What movement, what are you are you talking about?"

"The trees, of course, the fucking shrubs. And one day we'll look up and there they'll be, branches reaching in, jamming our M-60s, curling around our waists."

"Like Birnam Wood, huh?"

"Actually, I was thinking more of triffids."

Stephen Wright, Meditations in Green

Nature's agency

"Of course,

line for a while. You have to concentrate because if you blink or look away for even a moment you might miss it, they aren't dumb despite what you may think, they're clever enough to take only an inch or two at a time.

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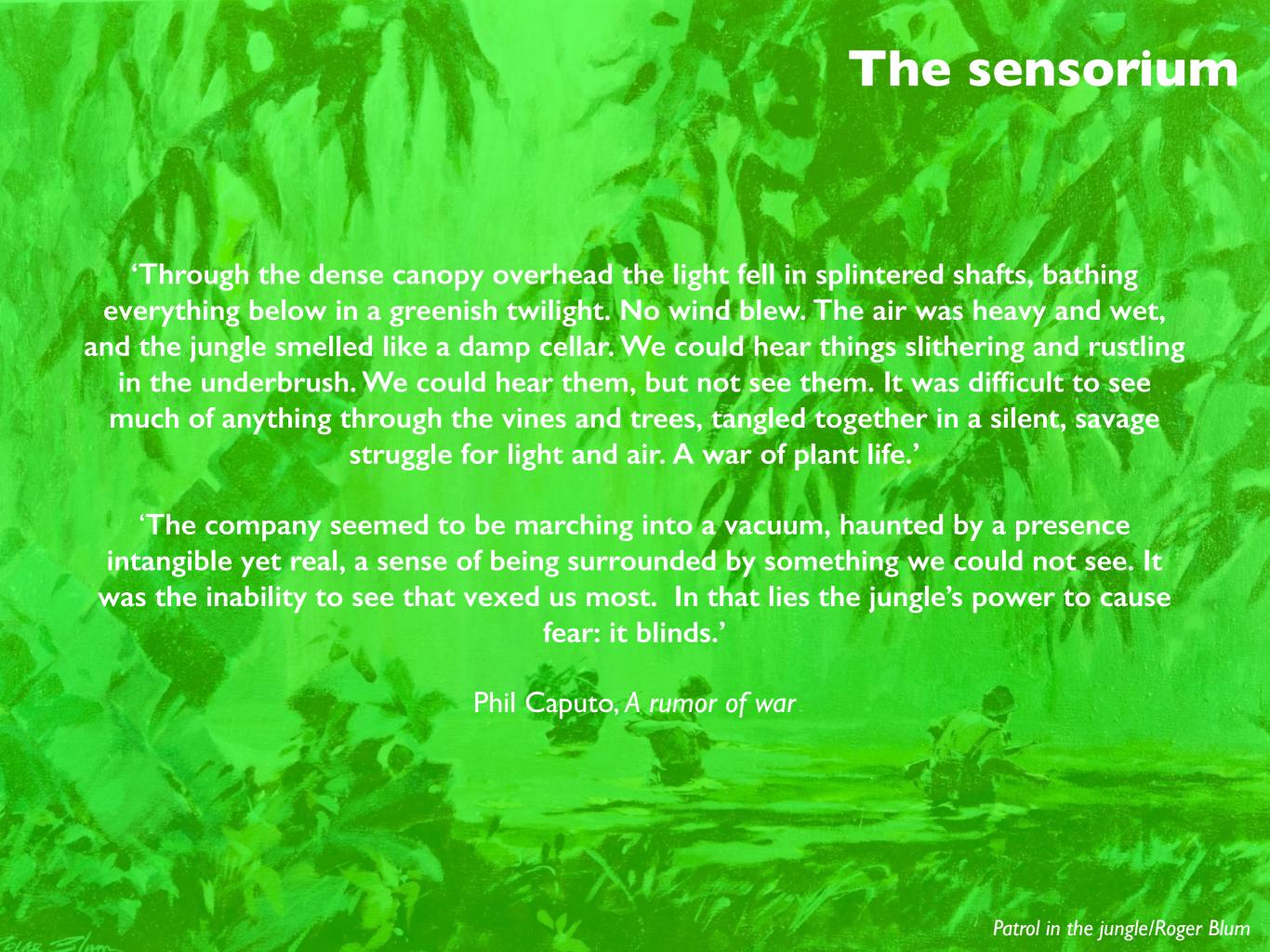
Stephen Wright,

'There were moments when I could not think of it as heat—that is, as a condition of weather; rather, it seemed to be a thing malevolent and alive.'

Phil Caputo, A rumor of war



'When the helicopters flew off, a feeling of abandonment came over us. Charley Company was now cut off from the outside world. We had crossed a line of departure ... between the known and the unknown. The helicopters had made it seem familiar. Being Americans, we were comfortable with machines, but with the aircraft gone we were struck by the utter strangeness of this rank and rotted wilderness.'



The sensorium

'The patrol entered the jungle. At first Claypool was grateful for the shade. Five minutes later his uniform was heavy with sweat. He had difficulty breathing. It was like being locked in a sick room with a vaporizer jammed on high. A cloud of tiny bugs swarmed about his face, flew in and out of his mouth. He spit out some swallowed the rest. Fat drops of sweat slid across the lenses of his glasses, transforming the forest into a swirling blob of shimmery green... He couldn't see, he couldn't breathe....

'Water dripped from every leaf tip though it hadn't rained in weeks. The mud was slippery with moss or algae. In the broken light falling through the tiers of vegetation massed above their heads everyone's face looked green. Claypool was exhausted. The undergrowth tugged at his feet....

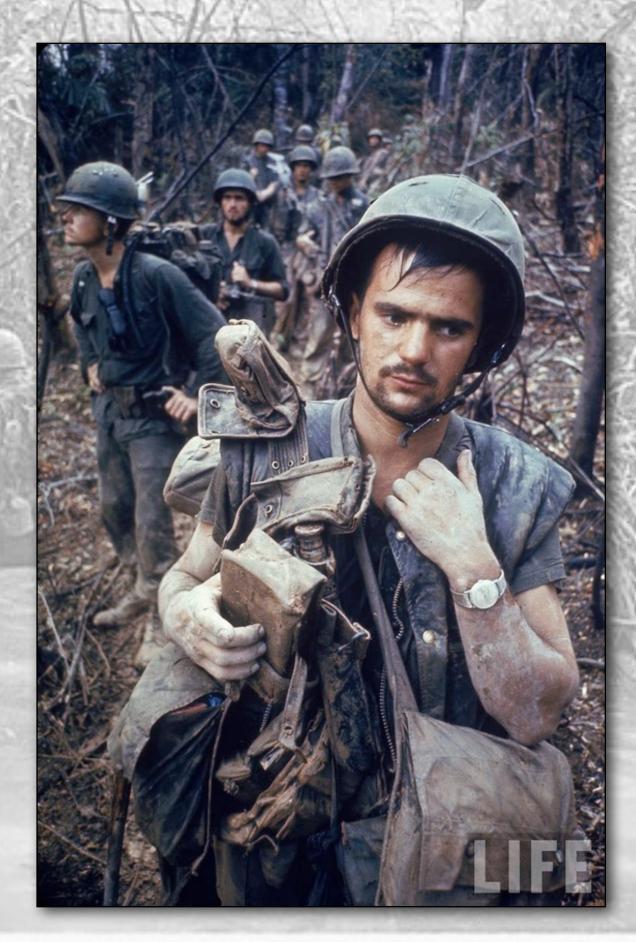
'He began to itch. But when he scratched he made ugly red furrows down his arms, soft dirty skin rolling up under his nails. Heat steamed from the soil. The sun was green. Claypole was being baked...'

Stephen Wright, Meditations in Green

'Up ridges, down ridges, over ridges, wading through rocky streams, hacking at jungle growth, breathing in and hopefully breathing out some of the constant bugs that continuously swarmed around our heads, watching our skin as it quickly deteriorated from the numerous bites, scrapes, cuts, tears, thorns, and other abuses of the environment that attempted to beat our bodies into submission. The clothes and boots forming the inanimate part of our body protection were quickly drenched with sweat, dirt, mashed bugs, and the mixed blood and juices from both the bugs' bodies and our own. Covering everything was the smell of slimy, rotting vegetation. Our clothes and our bodies were beginning the rotting process of the jungle. Every scratch was a breeding spot for bacteria which could result in the rapid growth of jungle rot. This was the essence of a jungle patrol.'

Frederic Downs, The killing zone: My life in the Vietnam War

War made flesh





'We walked along. Forward with the left leg, plant the foot, lock the knee, arch the ankle. Push the leg into the paddy, stiffen the spine. Let the war rest there atop the left leg: the rucksack, the radio, the hand grenades, the magazines of golden ammo, the rifle, the steel helmet, the jingling dogtags, the body's own fat and water and meat, the whole contingent of warring artifacts and flesh. Let it all perch there, rocking on top of the left leg, fastened and tied and anchored by latches and zippers and snaps and nylon cord. Packhorse for the soul.'

Tim O'Brien, If I die in a combat zone

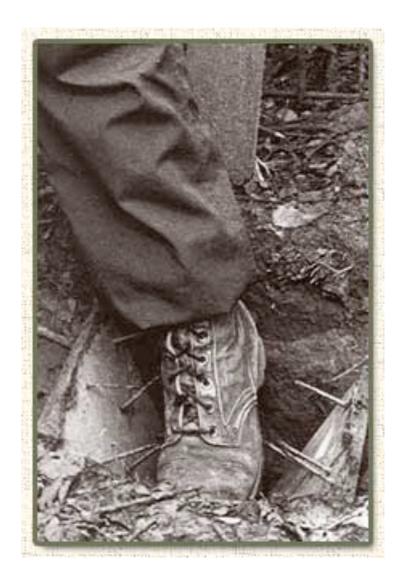
Cyborg nature

'We were making history: the first American soldiers to fight an enemy whose principal weapons were the mine and the booby trap. That kind of warfare has its own peculiar terrors. It turns an infantryman's world upside down. The foot soldier has a special feeling for the ground. He walks on it, fights on it, sleeps and eats on it; the ground shelters him under fire; he digs his home in it. But mines and booby traps transform that friendly, familiar earth into a thing of menace, a thing to be feared as much as machine guns or mortar shells. The infantryman knows that any moment the ground he is walking on can erupt and kill him; kill him if he's lucky.'

Phil Caputo, A rumor of war







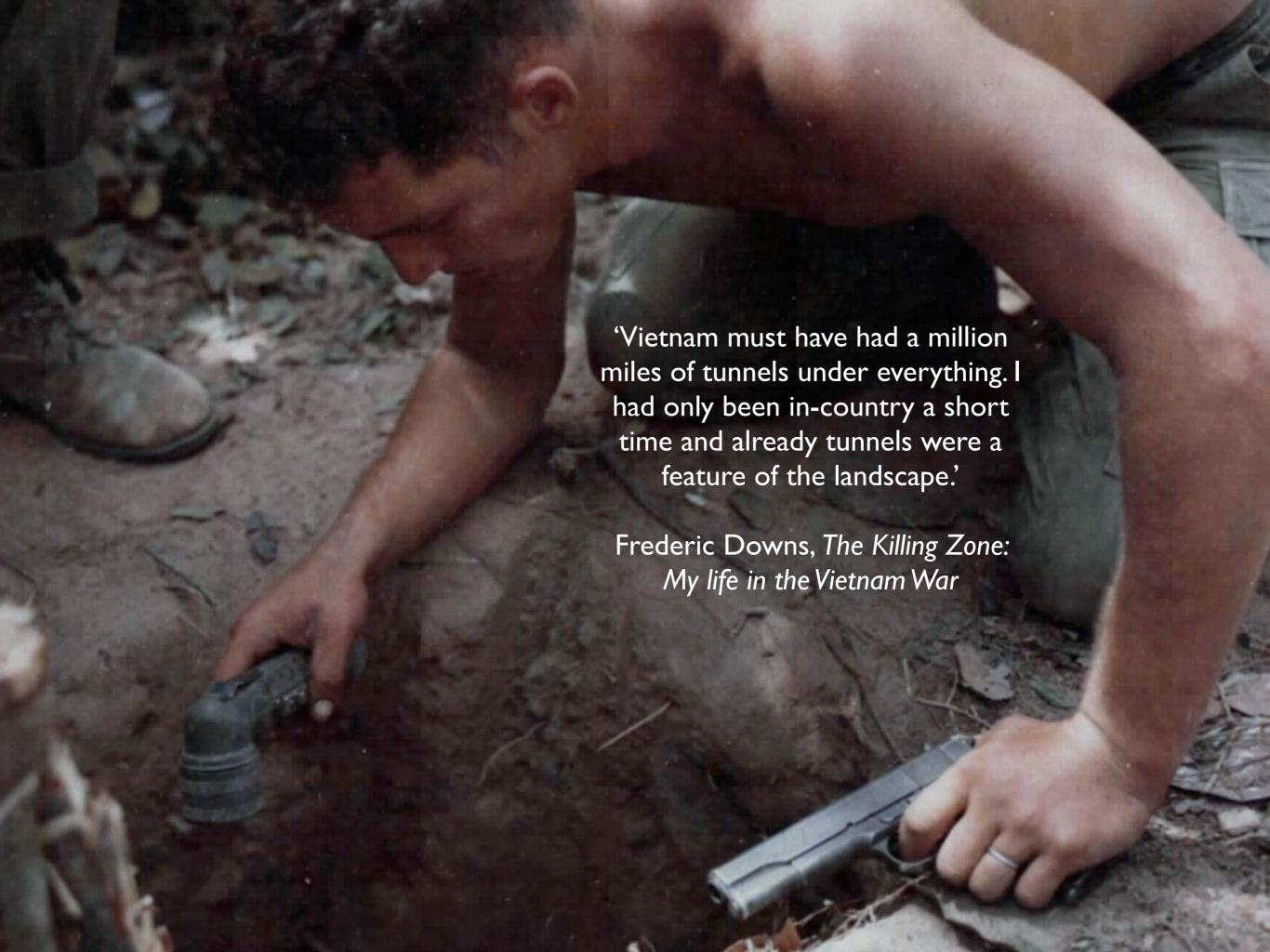


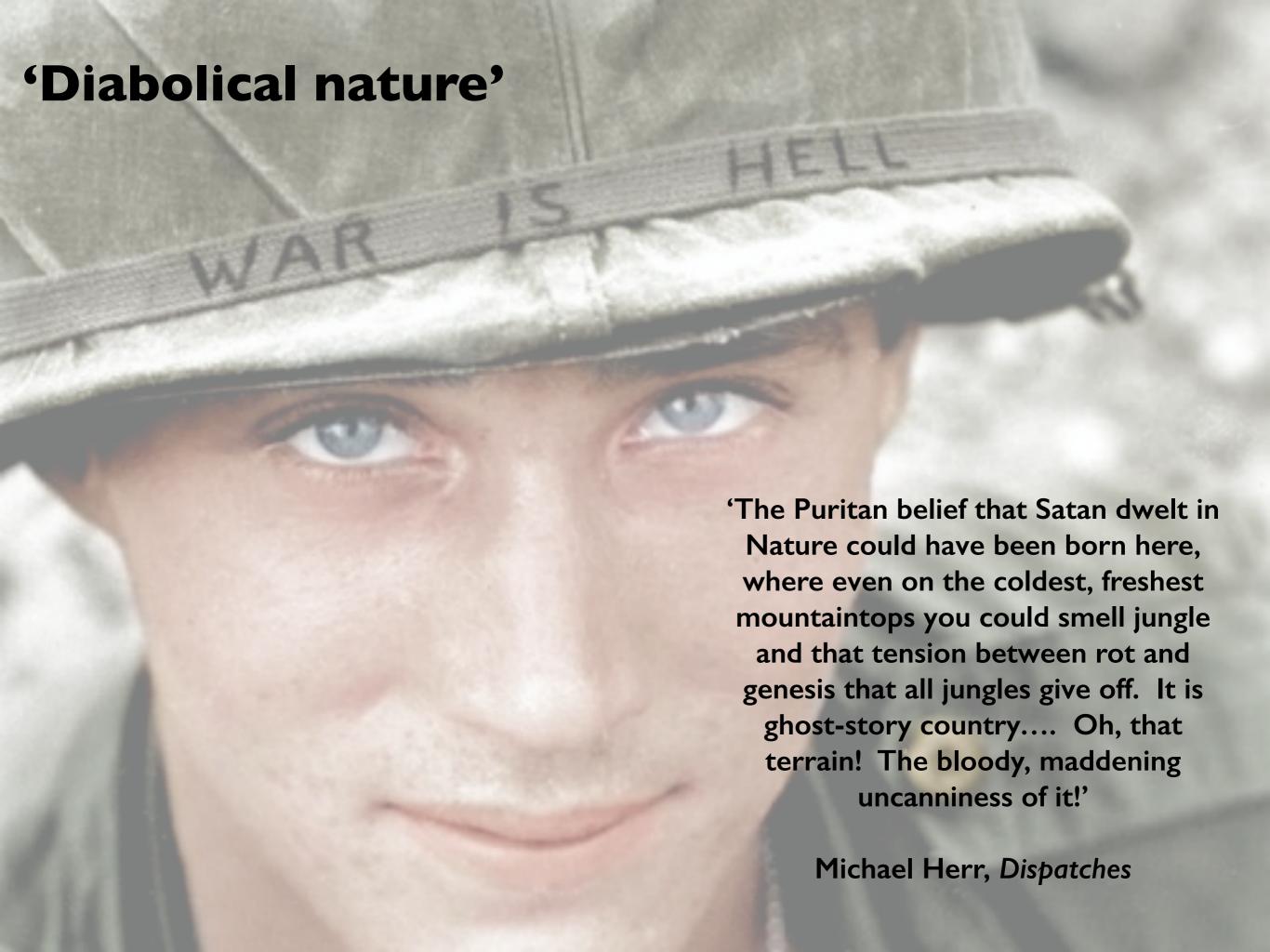




'You try to second-guess the mine. Should you put your foot to that flat rock or the clump of weed to its rear? Paddy dike or water? You wish you were Tarzan, able to swing with the vines. You try to trace the footprints of the man to your front. You give it up when he curses you for following too closely; better one man dead than two. The moment-to-moment, step-by-step decision-making preys on your mind. The effect sometimes is paralysis. You are slow to rise from rest breaks. You walk like a wooden man ... with your eyes pinned to the dirt, spine arched, and you are shivering, shoulders hunched....

"'It's more than the fear of death that chews on your mind," one soldier, nineteen years old, eight months in the field, said. "It's an absurd combination of certainty and uncertainty: the certainty that you're walking in mine fields, walking past the things day after day; the uncertainty of your every movement, of which way to shift your weight, of where to sit down."







'For weeks we had to live like primitive men on remote outposts rimmed by alien seas of rice paddies and rain forests.... Our days were spent hacking through mountainous jungles whose immensity reduced us to an ant-like pettiness. At night we squatted in muddy holes, picked off the leeches that sucked on our veins, and waited for an attack to come rushing at us from the blackness beyond the perimeter wire. The air-conditioned headquarters of Saigon and Danang seemed thousands of miles away. As for the United States, we did not call it "the World" for nothing; it might as well have been on another planet.

'It was the dawn of creation in the Indochina bush, an ethical as well as a geographical wilderness. Out there, lacking restraints, sanctioned to kill, confronted by a hostile country and a relentless enemy, we sank into a brutish state.'...

Phil Caputo, A rumor of war

'Scorched by the sun, wracked by the wind and rain of the monsoon, fighting in alien swamps and jungles, our humanity rubbed off of us as the protective bluing rubbed off the barrels of our rifles. We were fighting in the crudest kind of conflict, a people's war. It was no orderly campaign, as in Europe, but a war for survival waged in a wilderness without rules or laws.'

Phil Caputo, A rumor of war

'Every day we spent in the jungle eroded a little more of our humanity away.'

Frederic Downs, The Killing Zone: My life in the Vietnam War

Regeneration?

The coordinates for that location and the time for firing would be relayed to the gun crews. At the specified time, the gun crews would be awakened. Perhaps it would be just after midnight. As the minutes ticked closer to a time set by an unknown intelligence the men would load the artillery pieces, anticipating the release of their impersonal death into a grid square. The gun commander would give the order to fire and the night would explode with man's lightning and thunder. After the prescribed rounds, the guns would cease, the cleanup would begin, and the men would go back to their bunks. Thinking what? Within the range of those guns, within a specified area, the Central Highlands had for a brief moment changed from the jungle it had been for thousands of years into the particular insanity of man. As the gun crews wandered back to their bunkers to settle down for the night, the jungle would also begin settling down for the night to begin healing the new wounds.'

Frederic Downs, The Killing Zone: My life in the Vietnam War

"Unforgettable . . . A beautifully crafted novel of unrivaled authenticity and power, filled with jungle heroism, crackerjack inventiveness, mud, blood, brotherhood, hatred, healing, terror, bureaucracy, politics, unfathomable waste, and unfathomable love."

—CHRISTINA ROBB, Pulitzer Prize-winning journalist

MATTERHORN

A NOVEL OF

THE VIETNAM WAR

"RIVETING.

Destined to become a classic."

—VINCE FLYNN

KARL WINCE FLYNN

KARL

MARLANTES

'In the blackness around Matterhorn the jungle lay breathing quietly after the convulsive fury of the morning. Jackson felt as if the jungle were resting, preparing to make its own assault on Matterhorn when these destructive insects left it to clean its own wounds. The jungle would slowly creep up the hill, covering it with new green skin, once again sheltering the exposed clay and rock, hiding the garbage thrown down its sides, softening the artificial lip of the LZ, and rounding Matterhorn smooth once again...

'He thought of the jungle, already regrowing around him to cover the scars they had created...

'He was acutely aware of the natural world.

He imagined the jungle, pulsing with life, quickly enveloping Matterhorn, Eiger, and all the other shorn hilltops, covering everything.

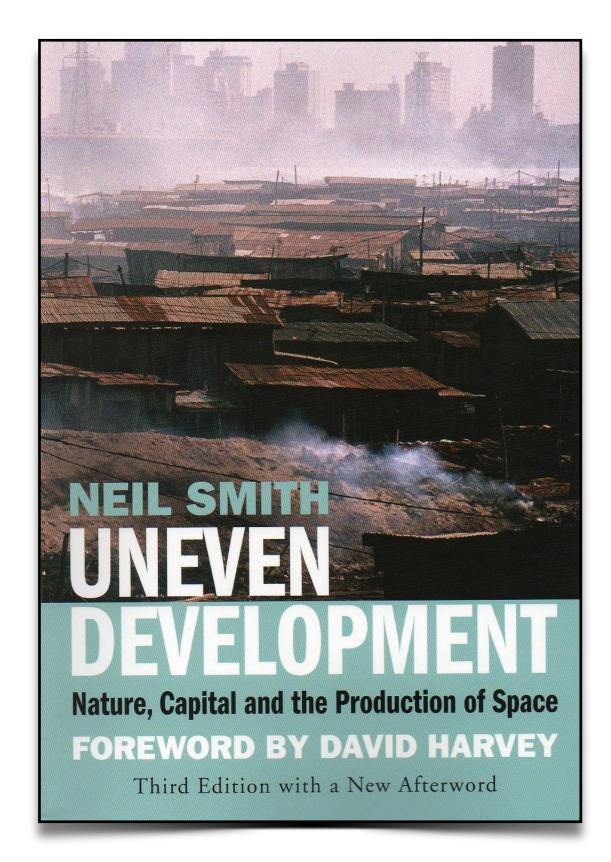
All around him the mountains and the jungle whispered and moved, as if they were aware of his presence but indifferent to it."



'The body's unruly matter is war's most necessary and most necessarily expendable raw material. While many analyses of US war violence have emphasized the technologically facilitated withdrawal of American bodies from combat zones in favour of air strikes, smart bombs, remotely piloted drones, and privately contracted fighting forces, the wars in Iraq and Afghanistan could not carry on without the physical presence of tens of thousands of such bodies...

'Soldiers' bodies are not endpoints for power but rather places where it abides and transforms, "relays" through which it moves on to other bodies and still others.'

Ken MacLeish, Making war at Fort Hood (2013)



'Come on nature I don't want to read or talk about the world Come on nature Let me show the way that I've been feeling all along'

The Proclaimers cited in Neil Smith, 'Nature at the millennium'

Dictionary Dictionary of war

EDITIONS

Idea

Frankfurt Munich Graz Berlin Novi Sad Gwangju Bolzano Taipei New York

DICTIONARY OF WAR is a collaborative platform for creating 100 concepts on the issue of war, to be invented, arranged and presented by scientists, artists, theorists and activists at four public, two-day events in Frankfurt, Munich, Graz and Berlin. The aim is to create key concepts that either play a significant role in current discussions of war, have so far been neglected, or have yet to be created.

DICTIONARY OF WAR is about polemics in various respects: It seeks confrontation with a reality that is characterised by the concealment of power relations the more that one talks about war and peace. But it is also about finding out to what extent war may function as an "analyzer of power relations" that constitutes current changes.

NAVIGATION

FAQ Video archive Login Search Chaos Tools AJAX Demo Legal Notice Changes that have been producing ever new wordings: The new war, post-modern war, global war, immanent war - all sorts of labels that indicate that the juridical model of sovereignty would seem to have had its day: war as an armed confrontation between sovereign nation states is a thing of the past.

While this still refers to conflict between different interest groups that are defined by the degree of their intensity and extension, unlike in the past war serves to regulate rather than destroy or renew existing power relations.

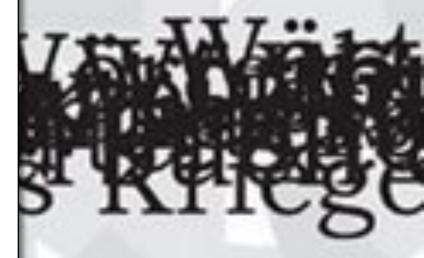
War is a "constitutive form of a new order" that no longer knows an inside or outside, that not only destroys but also produces life. In this new world order there is no difference between war and non-war: war is perpetual and everywhere.

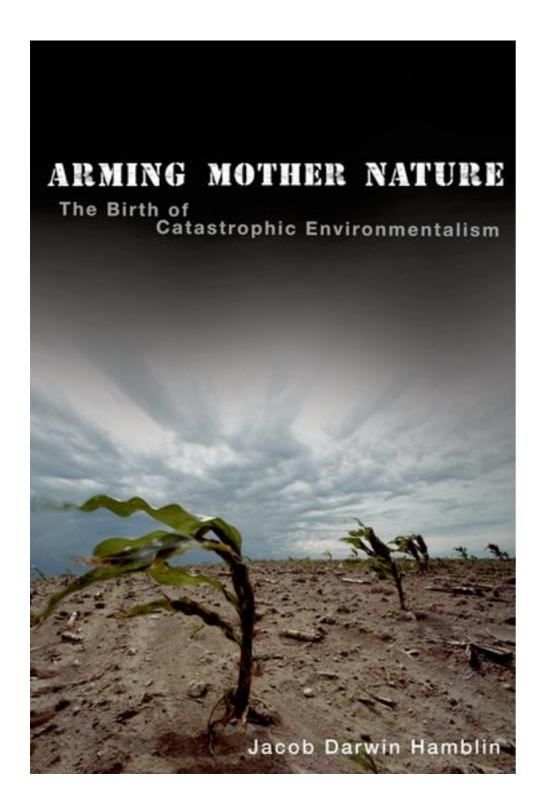


Manhood Marketing War Marschgepäck Mine Mobilization Mukaddimah: Le Bout du Monde/Anwal Na tragu mitologije Narrating a time of war National Anthem National Mythomania NATO (as Architectural Critic) Negotiation

Neutrality







'[M]odern science and the Cold War together gave birth to ideas about the catastrophic consequences of human-induced changes in the natural environment. There is an extraordinary irony in it. The conflict that created this awareness also conspired to defeat efforts to address global environmental problems. The Cold War sent scientists to learn how to exploit the natural world and to protect humans in the event of worldwide conflagration. It created anxiety and nursed a catastrophic worldview among environmentalists and scientists alike, suggesting that humans already were toying with "synoptic scale" forces that might have long-term effects. Yet the Cold War also created skepticism about the notion of catastrophe, as politicians on both sides of the global conflict played up the dangers for political purposes, and as scientists interpreted even the most massive geophysical convulsions as temporary, ephemeral changes in the sweep of natural history.'