

Introduction

Lisa Gorton

One afternoon, coming back from the beach, a Sydney friend stopped at a garage sale. There, she found a copy of the Readers Digest Great World Atlas. Its first edition appeared in 1961; its fourth revise, in 1962. Later, this friend found another edition online, from 1968. Because of recent interest in nuclear testing, today I want to speak about the nuclear era of the Great World Atlas.

The yield of nuclear explosions is measured in megatons. In the whole of the Second World War, including the bombing of Hiroshima and Nagasaki, two megatons were exploded. In the time between the Great World Atlas's first edition and fourth revise, 340 megatons were exploded in above-ground tests.

Nuclear testing, above- and below-ground, continued throughout the various editions of the Great World Atlas. France and China continued above-ground tests until 1974 and 1980, respectively. The United States and Russia recently ended their Intermediate-range Nuclear Forces treaty, both claiming that the other side was already violating that agreement. China was never a signatory to it.

I. THE READERS DIGEST GREAT WORLD ATLAS 1961 (1962).

Between the time of its publication and fourth revise they exploded the bomb they called Vanya over Novaya Zemlya—its fireball five miles wide hung a second sun over the island—its cloud rose into the mesosphere—black rain over the Kara Sea, Barents Sea, Alaska, Norway, Finland, the Ukraine, northern Canada—lines leading back to the closed cities—to Arzamas-16 (Sarov), to Chelyabinsk-70 (Snezhinsk), near the Mayak site where they loosed the radioactive waste into Lake Karachay, Lake Irtyash, into the Techa river past the villages to the river Ob, the Arctic Sea—its radioactive cloud moving northeast over Berydanish, Satlykovo, out to Tygish—Between the time of its publication and fourth revise they exploded the bomb they called Starfish Prime off Johnston Atoll over French Frigate Shoals, high inside the thermosphere—Its aurora—a blinding white flash, green sphere of light, vast cloud outflung in turning arcs, in circles sweeping outwards—flared across the earth's magnetic field lines, debris lighting the sky from Taraw, on the equator, down to Apia, Wellington, Tongatapu, Campbell Island—trapping radiation along the field lines, irradiating the satellites TELSTAR, KOSMOS, ARIEL—the classified 'national reconnaissance satellites' ZENIT, CORONA, gridding the earth in rectangles of film—Its fallout rained over the world—Between the time of its publication and fourth revise they exploded plutonium over the salt-bush scrub of Maralinga, at Taranaki, north of the straight train line across the Nullabor, in

secret trials they had named Operation Tims and Operation Vixen—Its plumes, a hundred miles long, drifted on the wind—They had taken the sacred objects, trucked the people south across the rail line to the coast at Yalata—She said, ‘Where are we going? We are going to a place we have never been to’—Some people walked, leaving sand tracks in the desert for the people left behind—the tracks blew away—lines leading back to Calder Hall at Windscale on the grey Irish Sea—Between the time of its first publication and fourth revise they exploded the bomb they called ‘Storax Sedan’ underground at the Nevada Test Site, as part of their Peaceful Nuclear Explosions program, lifting a dome of earth 90 metres above the desert floor—more than twelve million tonnes of earth exploding outwards, a radioactive cloud separating into two, drifting north-east and then east over Iowa, Nebraska, South Dakota, Illinois, across to the Atlantic—In Las Vegas people watched the explosions at the Test Site from their hotel windows, put on their radiation badges and sat outside—its clouds spreading between the Cascade and Rocky Mountain Ranges—they collected the children’s teeth for a study—Between the time of its publication and fourth revise they exploded the bomb they called Bighorn over Christmas Island (Kiritimati) in their year-long Dominic series of thirty-one nuclear explosions over the ‘Pacific Proving Ground’—filmed with EG&G Inc. rapatronic cameras, at 2400 frames a second, at one frame a minute—capturing its fireball, sun-like until its shockwave, rebounding off the ground, smashed into it, a cloud—a film-like sequence of high-speed photographs—‘the critical information needed to build better bombs’—lines leading back to Los Alamos, to the Lawrence Livermore National Laboratory, to Hanford in sage-bush country on the Columbia river—Between the time of its first publication and fourth revise they exploded more than a hundred atmospheric bombs at the Semipalatinsk Test Site (the Polygon) in Kazakhstan, south of the valley of the River Irtysh, out to the Karagandy Ranges, south as far as Degelen Mountain, east to Chagan, where the river bends—testing them on purpose-built apartments, bridges, underground metro stations, trucks, planes—black winds over the industrial city of Ust-Kamenogorsky, Znamamenka and the Kazakh steppes, the towns and villages—at Dispensary No. 4 (IRME) they studied its effects on the local people and their newborn children—She said, ‘Like hair burning—the smell came back from the earth each time it rained’—Between the time of its first publication and fourth revise they fired the thermonuclear warhead they called Operation K from Kapustin Yar south of Stalingrad (Volgograd) towards the Sary Shagan test range, detonating it in the troposphere south-west of Zhezqazghan—a pulse so strong it fused buried power cables for six-hundred miles—Between the time of its first publication and fourth revise they exploded the fourth of their Gerboise bombs over Reggane’s ‘Sahara Centre for Military Experiments’—a vast flash, an enormous ball of bluish fire, red at its centre, a cloud carried on the desert wind—That same year, they started on their nuclear test series with jewel names in the granite mountains at In Eker—the desert base they named Oasis 2, invisible from the road, east of Tan Affela—where during ‘Operation ‘Béryl’ the steel door of the tunnels exploded into the air on a rush of flame—its ochre-coloured cloud turning to black over the desert, drifting eastwards—The chief of the armies fled that night—they had brought in crates of guinea pigs—they had the soldiers crawl across the Forward Zone—

II. THE READERS DIGEST GREAT WORLD ATLAS 1968.

In the year of its second edition animals had cleaned the skeletons of the four dogs they shot and left in the bomb crater at Marcoo—where the family had camped on the still-warm earth, drinking black water—the child stillborn—and the black mist, greasy and thick, slid through Wallatinna and Mintabie and Ernabella, north of One Tree, Emu Field—In the year of its second edition in their

secret Pearce report they declared Maralinga clean and signed a contract relieving their government of any further responsibility—they had ploughed more than twenty kilos of plutonium into the desert sand—a half-life of twenty-four thousand four-hundred years—In the year of its second edition William Penney, who ran the Maralinga programme, had attended the House of Lords as a life peer, taking the title Baron Penney of East Hendred in the Royal County of Berkshire—At the Manhattan Project they had called him ‘the smiling killer’—In the year of its second edition Lake Karachay, having dried up, loosed its dust to the wind over the steppes, over half a million people—its lake bed, three-and-a-half metres of high-level radioactive dirt—In the year of its second edition the people of Enewetak sent a petition—‘for twenty-two years the people of Enewetak have been living the life of exiles in our own country—these years have been hardship, poverty and near starvation’—the landing craft had arrived—the translator had said to them, ‘You are like a rabbit fish wriggling on the end of a spear. You can struggle all you want, but there is nothing you can do to escape’—islands obliterated, plutonium in the lagoons, two-hundred megatons exploded over their Pacific Proving Grounds, radiated coral debris falling ankle-deep like snow—In the year of its second edition President Johnston promised the Bikinians they could return to their atoll—who had been exiled on Rongerik Atoll, on Kwajalein Atoll, on Kili Island, on Ejit—In the year of its second edition they said, ‘There’s virtually no radiation left and we can find no discernible effect on either plant or animal life’—the jelly-fish babies, boneless, with transparent skin, the still-born babies, their skin like a bunch of purple grapes—In the year of its second edition they exploded the plutonium bomb they called CHIC-8 over Lop Nur, on the the Silk Road at the edge of the Tanim Basin, between the Taklamakan and Kumtag deserts in Xinjiang Province—earth falling from the sky, without wind or storm, they watched it from the schoolyard—In the year of its second edition they exploded the hydrogen bomb they called ‘Canopus’ over Fangataufa Atoll—its cloud reached twenty-three thousand metres, drifting to the north east, over Pukaroa, Tureia, Reao, the Gambier Islands—They classified their study of ‘biological samples’—or, the local people—the ‘Service Mixte de Controle Biologique’—

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介绍

一天下午，我悉尼的一个朋友从海滩回家的路上看见一家人在车库卖破烂。她走过去看有什么可以买的，结果她发现了“读者文摘”出的一本“世界地图册”。这本地图册第一版出在1961年，第四版出在1962年。我的这个朋友后来又在网上找到了1968版。鉴于最近大家对核试验的关注，我想借“世界地图册”谈一谈以往的核试验年代。

核爆炸是以百万吨量级计算的。整个第二次世界大战，包括广岛和长崎，核爆炸为两个百万吨。而“世界地图册”第一版到第四版之间，就有340个百万吨量级的地上核试验。

在“世界地图册”几次改版的同时，地上或地下核试验从来没断过。法国与中国分别于1974年和1980年进行了地上核试验。美国和俄罗斯最近停止了双方签订的中程核导弹条约，都指责对方首先违反了条约规定。中国从来没有签过这个条约。

1.“读者文摘”的“世界地图册,1961版”(1962)

世界地图册一到四版之间一个名为“万尼亚”的核弹在俄罗斯北部的诺瓦雅赞姆拉岛爆炸。8千米宽的火球像太阳一样悬挂在岛屿的上空。火球产生的浓云冲进大气中间层，喀拉海，巴伦支海，阿拉斯加，挪威，芬兰，乌克兰以及加拿大北部都开始下黑雨。黑云一直连到俄罗斯的两座保密城市，一个阿尔扎马斯-16（萨罗夫市），一个车里雅宾斯克-17（斯涅金斯克市）。这两个城市都离卡雅科不远，就是在这儿他们把辐射废弃物倒进卡拉恰伊湖，伊尔塔什湖，还倒进了铁沙河，被污染的废弃物顺着河水经过几个村庄又流进奥布河最后流进阿克提海。随之而来的放射性云经过东北方向的伯蒂尼雅什和萨特利克沃，然后进入提埃什。在这期间，一个叫作“海星第一”的核弹在离约翰斯顿岛不远的弗伦奇弗里盖沙洲上空热气层爆炸。

爆炸施放出来刺眼的白光，绿色的光球，从周边巨大的云团中甩出无数燃烧的弧线，那些弧线带着燃烧物打着旋向四外爆裂，穿过地球磁场线，把天空照得通明，从赤道上的塔罗岛到西萨摩亚的阿比亚岛，到新西兰的威灵顿，到汤加，到坎贝尔岛。一路上有些国家放的卫星如“Telstra, Kosmos, Ariel, Zenit, Corona 都如数被放射线辐射。爆炸碎片像下雨一样把这个世界浇了个遍。也是在这段时间，他们还在澳大利亚的马拉灵加引爆了钚核弹，还秘密地把钚核弹爆炸试验标上标签。钚核弹爆炸的烟幕乘着风拉了足足161千米长。他们带上神圣物件，载着人群穿过铁路线一路向南来到亚拉塔海岸。她说他们要去一个从来没有去过的地方。有的人走过沙漠，在身后留下一串脚印，他们希望脚印能引导后来人。但这条踩出来的路被炸没了，被那个在爱尔兰海边上的科尔德霍尔核电厂炸没了。

还是在这段时间，他们在内华达州试验场地下引爆了一个叫“斯托拉克斯轿车”的核弹。据说是为了实现一次和平探索核能的计划。爆炸把沙漠掀起90米高，它带起的灰尘有1200万吨重。充满辐射的云雾兵分两路扩散。一股云雾向东北再往东移动，经过爱荷华州，内布拉斯加州，南达科他州，伊利诺斯州后进入大西洋上空。另一股云雾移动到小瀑布与落基山脉之间久久地徘徊不散。（他们收取儿童的牙齿作研究。）在拉斯维加斯的人们站在酒店窗前观看这场爆炸，然后带上防辐射徽章，走到酒店外边闲坐。

世界地图册第一版到第四版之间，他们又在“圣诞岛”（吉里提玛蒂岛）上空爆炸了一枚叫作“大牛角”的核弹。这次爆炸只是他们一年期“多米尼克核爆系列”31枚中的一颗。爆炸第一次用EG&G公司生产的每秒2400张超高速照相机记录了下来：一个像太阳一样的大火球腾空而起，大火球的冲击浪砸到地上，又被弹起，狠狠地甩向天空激起一团云雾。一条“需要关键信息，为做更好核弹”的短信被传送到了“洛杉矶劳伦斯利弗莫尔国家试验室”和哥伦比亚河上的“罕福特试验室”。

在这期间，他们在大气层引爆了一百多颗核弹，在哈萨克斯坦的塞米波拉廷斯克试验基地，在额尔齐斯河峡谷的南面，在卡拉甘地山脉，在德吉尔恩山，在查干。他们专门建造了楼房，桥梁，地铁，卡车和飞机用来试验核弹的威力。黑风席卷了工业城市乌斯特坎姆诺夫斯基，扎纳曼卡和哈萨克平原上的城镇与村庄。在“四号医务站”（IRME），他们研究核弹爆炸对当地人以及新生婴儿的影响。她说，每次下雨都从土地翻上来一股头发烧焦的味道。

还是在这段时间，他们在斯大林格勒南部的卡普斯金雅尔发射了一枚叫作“K行动”的热核导弹，弹头冲过萨利沙甘上空，最终在哈萨克斯坦西南上方的对流层爆炸。爆炸力之强，地下掩埋的965.6千米的电缆都被点着了。不久，又有人在“撒哈拉军事试验中心”上空引爆了他们第四颗“跳鼠”核弹。随着一束瞬间闪耀的光芒，一团蓝色的红心火球冲上天空，风卷着云雾狂奔。同一年，他们又开始在因埃克的大理石山区试验带着珠宝名称的核弹系列。试验基地建在沙漠上，取名为“绿洲二号”。从公路上看不见，隐蔽在坦阿菲拉的东面。在一次“绿柱石行动”中，地道外的铁门被炸上了天，铁锈色的云雾逐渐变成黑色，穿过沙漠向东漂移。当天晚上驻军司令逃跑了---留下了几笼子的试验鼠和一群在“缓冲区”爬行的士兵。

2. “读者文摘”的“世界地图册”1968年版

到地图册出第二版的时候，在玛库，当初被枪杀扔在弹坑里的四条狗早以被动物啃得只剩下了骨架。而生活在那里的人还在未褪去热量的土地上安营扎寨，喝着发黑的水。有的孩子生下来就没有了呼吸。黑灰的雾霾又黏又厚，向瓦拉提纳，闵塔比和额纳贝拉弥漫，一直游动到伊缪菲尔德镇的北边。同一年，在一份秘密报告中，他们声称玛拉灵噶镇已经无污染，他们的政府责任到此可以终止了。而实际上，他们铲出二十多公斤的钚扔到了沙漠里，它带给这块土地的辐射到12200年后才能减少一半。同时，负责玛拉灵噶治理工程的威廉-潘潘尼却以“生命保护人”的身份参加英国上议院的会议，而且还带着伯克郡“皇家郡”的男爵头衔。美国“曼哈顿计划”曾把潘尼男爵称为“微笑的侏子手”。

世界地图册第二版之际，卡拉柴夫湖干涸，留下了三米半厚的高辐射湖泥。漫天的黄沙笼罩着广袤的平原和生活在这里的五十多万男男女女。生活在埃内韦塔克群岛的人们开始抗议，他们上书政府说，“二十年来，我们一直有家无归，过着艰难困苦饥饿难熬的日子。”总算有人来了，得到的回答却是：你们就像被扎在鱼叉上的兔子鱼，再怎么挣扎也没用了。那些消失了的岛屿，那些被钚污染了的环礁湖，那些被两百个百万吨量级核弹轰炸过的太平洋试验场，带着辐射的珊瑚碎渣像雪片一般从天而降没过脚踝。

那一年，约翰逊总统许诺比基尼岛民可以回家了；这些岛民一直在龙吉里克珊瑚岛，夸加仑珊瑚岛，吉利岛和埃吉特岛之间流浪。他们说辐射已经消失，所有的树木与动物都已经摆脱了辐射的伤害。而实际上，水母的新生儿或无生命或无骨透明；有的母亲生下来的婴儿从一出生就裹着一层紫葡萄似的皮囊。

又是同一年，他们在新疆塔里木盆地边上的“丝绸之路”一个叫罗布泊的地方引爆了一颗名为“CHIC-8”的钚核弹。天空下着黄土，没有风，没有雨。他们在一个学校的操场上观看着。那年，他们在南太平洋的方卡托发珊瑚岛引爆了一颗叫作“老人星”的氢弹。蘑菇云升到23000米高，然后向东北方向的帕卡罗阿岛，图雷雅岛，雷奥环礁，冈比尔群岛漂移。他们把这称为是一次“生物研究取样”。