

## FEATURE

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Green and Black?  
Black or Green?

Peter Christoff

# Bombs Away

Nic Maclellan

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## The hidden legacies of Britain's hydrogen-bomb tests

From the beginning of the nuclear age, the United States, Britain and France sought distant locations to conduct their Cold War programs of nuclear-weapons testing. For fifty years between 1946 and 1996, the islands of the central Pacific and the deserts of Australia were used to conduct more than 315 atmospheric and underground tests, at ten sites. The Western nuclear powers showed little concern for the health and well-being of nearby Indigenous communities and the civilian and military personnel who staffed the test sites.

Many Australians are aware of British atomic testing in Australia during the 1950s. The name 'Maralinga' serves as a symbol of obedience to Empire and racism against Indigenous peoples. But Britain's nuclear-test sites at Christmas Island and Malden Island are less well known, even though the United Kingdom conducted nine atomic- and hydrogen-bomb tests on these Micronesian islands in 1957–58.

Sixty years on, it's important to recall the history of this operation, codenamed Grapple, and the health and environmental legacies it has left for people across the South Pacific.

In the late 1950s, nearly 14,000 British military personnel and scientific staff travelled to the British Gilbert and Ellice Islands Colony in the central Pacific to support Britain's hydrogen-bomb-testing program. The British personnel were joined by hundreds of New Zealand sailors, Fijian troops and Gilbertese labourers.

To assert its place at the high table of postwar affairs, the UK government had decided to develop its own independent nuclear-testing program. After 1946, the US *Atomic Energy Act* restricted the transfer of nuclear research and technology to other countries—even a wartime ally like Britain. Relations between the United States and the United Kingdom were further strained by a series of spy scandals. During the 1950s, successive UK governments had also been struggling with the decline of Empire, facing anti-colonial revolt in India, Burma, Palestine, Kenya and many other colonies—culminating in the 1956 Suez Crisis and the failed invasion of Egypt by UK, French and Israeli forces.

At a time of postwar economic austerity, nuclear weapons were seen as a pathway to strategic influence. The United Kingdom, with the approval of Australian prime minister Robert Menzies—

but not the full cabinet or parliament—began its atomic testing program in Australia. As Elizabeth Tynan's wonderful new history *Atomic Thunder: The Maralinga Story* has documented, Britain conducted twelve atomic tests in Australia between 1952 and 1957. After Operation Hurricane at the Monte Bello Islands in Western Australia in 1952, British scientists continued with atmospheric nuclear tests at Emu Field and Maralinga in South Australia.

They also organised a series of over 600 minor trials, assessment tests and experimental programs. These trials involved the testing of bomb components and the burning of nuclear materials such as plutonium, uranium and beryllium. These experiments continued until 1963 and sent plumes of contaminated smoke across the land of the Anangu people, causing radioactive contamination that lasts to this day.

With the UK–Australia agreement limited to atomic testing, Britain needed another location for the development of hydrogen bombs. According to Lord Cherwell (chief scientific adviser to Prime Minister Churchill), the testing of thermonuclear weapons was central to maintaining Britain's status as an imperial power in the postwar era:

If we are unable to make the Bomb ourselves and have to rely entirely on the United States for this vital weapon, we shall sink to the rank of a second class nation, only permitted to supply auxiliary troops, like the native levies who were supplied small arms but not artillery.

Churchill, suffering from ill health in his final years in office, was greatly influenced by the power of the hydrogen bomb. The United States (with the 'Ivy Mike' H-bomb test in November 1952) and the Soviet Union (with its first thermonuclear test in August 1953) showed they had the capacity to move beyond atomic bombs to two-stage thermonuclear weapons, each with a

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yield of more than a megaton (equivalent to one million tonnes of TNT explosive).

The largest US nuclear test ever conducted was the massive fifteen-megaton Bravo, shot on Bikini Atoll on 1 March 1954. This test spread radioactive fallout across most of the atolls of the Marshall Islands. Days after the Bravo test, Churchill wrote to US president Dwight D. Eisenhower expressing his awe over the power of the H-bomb:

I am told that several million people would certainly be obliterated by four or five of the latest H-bombs. In a few more years, these could be delivered by rocket without even hazarding the life of a pilot... Another ugly idea has been put in my head, namely, the dropping of an H-bomb in the sea to windward of the island or any other seaborne country in suitable weather, by rocket or air plane, or perhaps released by submarine. The explosion would generate an enormous radioactive cloud, many square miles in extent, which would drift over the land attacked and extinguish human life over very large areas.

Just three months after Bravo, ignoring public protest across the Asia Pacific region, the British Cabinet Defence Committee, at a meeting on 16 June 1954, secretly decided to construct the H-bomb. After unsuccessful approaches to Australia and New Zealand to find suitable uninhabited areas for testing, the British government chose Christmas (Kiritimati) Island and Malden Island in the central Pacific as the test sites. The two islands were located in the British Gilbert and Ellice Islands Colony (today part of the independent nation of Kiribati).

Thousands of British military personnel, together with 551 New Zealand sailors and more than 270 Fijian soldiers and sailors, travelled to the central Pacific to participate in this testing program. They witnessed nine atmospheric nuclear tests between May 1957 and September 1958.

The initial three tests, codenamed Grapple 1 (Short Granite), Grapple 2 (Orange Herald) and Grapple 3 (Purple Granite), were detonated near Malden Island in May and June 1957. After these tests, the British government publicly announced that it had achieved a thermonuclear explosion in the megaton range. Privately, however, officials admitted that the explosive yield was much smaller and hadn't reached the megaton yield.

Facing an international moratorium on nuclear testing in 1958 and widespread international opposition to the tests, there was pressure to rush and develop a hydrogen bomb in the megaton range. Rather than send a naval task force back to Malden Island—hundreds of kilometres from the base of operations—it was decided to conduct further tests at Christmas Island. This decision saved millions of pounds and reduced enormous logistical problems but brought the tests close to the camps where British, New Zealand and Fijian personnel were stationed, and the village that

housed about 260 Gilbertese islanders (former plantation workers and their families, now labourers for the British military).

From oral testimony and archival research for my forthcoming book *Grappling with the Bomb*, there is evidence that these troops were placed in hazardous locations, which increased their risk of exposure to ionising radiation. After each nuclear test, for example, Fijian military personnel were involved in clean-up operations, including disposing of hundreds of birds that were maimed, blinded or killed by the nuclear explosions. Fijian sailors were ordered to dump drums of radiation-contaminated waste into the ocean. The Fijians ignored British regulations that banned fishing, and caught fish and crabs that may have been contaminated by radioactive fallout.

The April 1958 Grapple Y test, a massive explosion equivalent to 2.8 million tonnes of TNT, also sent radioactive fallout across the naval task force and the tent city that housed civilian and military personnel on Christmas Island.

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At the time, the UK government was well aware of potential hazards from radioactive fallout. With flights from Darwin, Royal Air Force aircraft had monitored the fallout from the 1950s US tests in the Marshall Islands, gathering valuable information on the yield and construction of the US hydrogen bomb. The 1954 Bravo test, which irradiated hundreds of Marshall Islanders, US weather men and the twenty-three crew of the Japanese fishing boat *Lucky Dragon*, showed the potential hazards of fallout from H-bomb testing.

As the UK military and Atomic Weapons Research Establishment scientists built a massive base on Christmas Island in 1956–57, they were aware of radiation hazards to local islander communities and the military personnel staffing the test sites. But, for reasons of cost, time pressure and cultural arrogance, the British authorities constantly cut corners on safety. Documents from the time reflect the casual racism that ensured the danger would be limited to the 'primitive peoples' of the central Pacific.

One example is a 1956 study by the Grapple Task Force, which prescribed a 'Danger Area' to warn off shipping, aircraft and fishing vessels during the tests. The study set 'several definitions of levels of radioactivity resulting from fall-out' and

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Bombs Away

Nic Maclellan



06 2017–07 2017

Nº 148

looked at the danger of an ‘accidental surface burst’. It noted that the ‘acceptable’ dosage of radiation was different for British personnel than for the islanders who lived on or near Christmas Island:

For civilised populations, assumed to wear boots and clothing and to wash, the amount of activity necessary to produce this dosage is more than is necessary to give an equivalent dosage to primitive peoples who are assumed not to possess these habits... It is assumed that in the possible regions of fall-out at Grapple there may be scantily clad people in boats to whom the criteria of primitive peoples should apply.

Officials reporting to the minister of defence then acknowledged that ‘the dosage at this level is about 15 times higher (for primitive peoples) than that which would be permitted by the International Commission on Radiological Protection’.

Makurita Baaro, the ambassador to the United Nations for the Republic of Kiribati, has recalled childhood memories of the way that Gilbertese children on Christmas Island were affected:

In 1963, I started school for the first time, and one of my classmates had no teeth. She never had teeth. Another boy in the same class had patchy white and brown skin and was forever teased for this. Both my classmates had something in common: they were born on Kiritimati where their parents were, when atmospheric tests were conducted between 1956 and 1962.

Sailors from the Fiji Royal Naval Volunteer Reserve (FRNVR) initially served aboard the NZ frigates HMNZS *Pukaki* and HMNZS *Rotoiti* and the British aircraft carrier HMS *Warrior* in 1957, as part of the British naval task force sent to monitor the tests. Later, from 1958 to 1960, hundreds more Fijian soldiers and sailors were deployed, often working to transport material to the island or as labourers around the Christmas Island base.

As an FRNVR reservist, Paul Ahpoy first travelled to Christmas Island in 1956 and witnessed seven nuclear tests. He later suffered a range of health problems, including the loss of hair and damage to his fingernails. Soon after the tests, Ahpoy developed a rare skin disease. His daughter, Annie, was born physically disabled and died at the age of three and a half. His son is unable to have children. He is one of many survivors facing health problems and concerned about potential intergenerational effects.

Ahpoy explains that, at the time, the FRNVR sailors had limited knowledge of the potential hazards of radioactive fallout. The Fijian language even used the term *kasigaga* (poisonous gas) rather than radiation:

We didn’t know what was the meaning of radiation or nuclear testing. I don’t think that any place in the South Pacific at that time had a word for radiation or for nuclear weapons or atomic things like that. We don’t know nothing at all.

Today, Ahpoy serves as president of the Fiji Nuclear Veterans Association. Since the 1990s, Fijian veterans have joined British and New Zealand personnel to seek recognition and compensation, which has been denied them by the UK Ministry of Defence (officials

continue to claim that troops were not exposed to hazardous levels of fallout).

Successive UK governments have refused to recognise contemporary claims for compensation. A 2004 legal case lodged by UK, NZ and Fijian veterans spent ten years working its way through the British courts before the case was finally rejected five to four by the UK Supreme Court in 2014. During this decade, dozens of the original litigants had died.

In response to UK government intransigence, Fijian prime minister Voreqe Bainimarama announced in 2015 that his government would provide financial support to the surviving Fijian military personnel and their families (Bainimarama himself is the son of a FRNVR sailor who led the first Fijian naval contingent to Christmas Island in 1957).

‘Fiji is not prepared to wait for Britain to do the right thing’, Bainimarama said at a ceremony for survivors on 30 January 2015. ‘We owe it to these men to help them now, not wait for the British politicians and bureaucrats. You may ask: why is Fiji taking responsibility for something that is the fault of Britain? My answer is this. Too much time has passed. The ranks of these survivors are rapidly thinning. Too many men—our fellow Fijians—have gone to their graves without justice.’

Bainimarama linked the recognition of the Christmas Island veterans to contemporary calls for global nuclear disarmament:

As one, the Pacific nations stand and say: Never again. Just as we implore the industrialised nations now to stand with us in the battle against rising sea levels caused by the carbon emissions they cause, we also implore them to join us in our commitment to make the Pacific nuclear free. It is a form of madness that we in the Pacific—the ocean that takes its name from the word ‘peace’—find incomprehensible. This is why we will always be on the side of those nations pressing for the dismantling of the world’s nuclear arsenals.

In 2017–18, as we mark the sixtieth anniversary of the Grapple tests, the issues of British nuclear weapons, Indigenous rights and a nuclear-free and independent Pacific are still with us.

There are debates in the UK parliament about the cost of renewing Trident, the heart of the UK nuclear arsenal. Scottish nationalists are calling for a nuclear-free and independent Scotland, seeking to remove UK nuclear submarines from Faslane as they move towards a second referendum on independence. The Marshall Islands—unsuccessfully—has taken Britain and other nuclear-weapons states to the International Court of Justice (ICJ) over their failure to meet disarmament obligations under the Nuclear Non-Proliferation Treaty; as a consequence, Britain has withdrawn from the ICJ jurisdiction to halt further cases against its nuclear arsenal. Eight Pacific island countries co-sponsored the December 2016 UN General Assembly resolution to start negotiations for a treaty banning nuclear weapons; these negotiations commenced in March 2017. The South Australian government is seeking to establish a nuclear-waste dump on Aboriginal land. The Tokyo Electric Power Company is wondering who will pay the horrendous price—US\$160 billion and counting—to clean up the world’s latest nuclear-sacrifice zone at Fukushima. The list goes on.

It is timely to remember the nuclear history of the Pacific, so that we do not repeat it. **■**

This article is based on Nic Maclellan’s forthcoming book *Grappling with the Bomb: Britain’s Pacific H-Bomb Tests*, to be published by ANU Press.