Australian Government
Department of Defence

DEFENCE UNEXPLODED ORDNANCE WEBSITE
ORDNANCE INFORMATION SHEET

ALL UXO MAY BE HAZARDOUS IF DISTURBED
DO NOT TOUCH – TAKE A PHOTO – MARK THE LOCATION – CALL THE POLICE

MORTAR – 4.2 INCH

Description

- The Smooth-Bore Muzzle-Loading (SBML) 4.2-inch mortar was a British-designed mortar introduced into Australian service in late 1942/early 1943. The Mark 3 became the standard model. Initially the ammunition was made of heavy cast iron, with a subsequent short range. Improved variants with increased range became available in 1944.
- The US M2 4.2 inch mortar (replaced in the 1950s with the M30 107mm/4.2 inch mortar) was also used in Australia during WWII by US forces undergoing training however the US version was rifled while the British version was smooth bore. Australian and US forces primarily used High Explosive and Smoke mortar bombs against pillboxes and defences in the WWII Pacific battles.
- The 4.2 inch mortar saw service with Australian forces during WWII, Malaya and Korea until eventually withdrawn from service in 1985 with the introduction of the 105mm L5 Pack howitzer. Their use in later years was primarily for training mortar locating radar operators.
- Several types of 4.2 inch bomb were produced including (not all may have been used in Australia):
  - **High Explosive** (HE) – contains a nose fuze and approx. 3.6-4.25 kg of high explosive.
  - **Smoke** (Smk) – contains a fuze, bursting charge and White Phosphorus (Smk WP) or Titanium Tetrachloride (Smk FM). Bursting and Base Ejection (BE) variants of the bomb were produced.
  - **Illumination** (Illum) - contains a burster charge and incendiary-like chemical to illuminate specific areas.
  - **Chemical** (Chem) – contained a nose fuze, bursting charge and various chemicals.
  - **Practice, Bursting** (Prac) – contains Calcium Chloride and Phosphorus.
- The 4.2 inch was used by a few Australian anti-tank and artillery units and was fired at limited live firing ranges in Australia. UXO of this type may be found on the surface or shallow buried (<0.5m).

Technical Data

- Bomb length : approx. 500-525mm
- Bomb diameter : approx. 105-107mm (~4.2 inch)
- Bomb weight : approx 9-13 kg (depending whether UK or US)
- Fuse/Burster : Sensitive fuse and HE bursting charge which can be easily detonated
- Filling : HE - approx 3.6 kg (US) to 4.25 kg (UK) high explosive
  Smk –approx 3-4 kg White Phosphorus (WP) or Titanium Tetrachloride (FM)
- Identification :
  - The body is usually made of cast iron/steel and may have one or more bands of colour.
  - Red, yellow, green or grey colours and bands were most often used to denote hazardous munitions however other colours may have been used or colours may have faded over time. It can be difficult to distinguish between dangerous and safe items - **treat all found munitions as dangerous**.

Images

Figure 1 - Example 4.2 inch mortars (L to R): HE, Smk (WP), Chem, Smk BE (sizes, colours & shapes may vary)

Figure 2 - Various unexploded 4.2 inch mortar bombs used on Hinchinbrook Island, Nth Qld (AWM ID P05257.027)

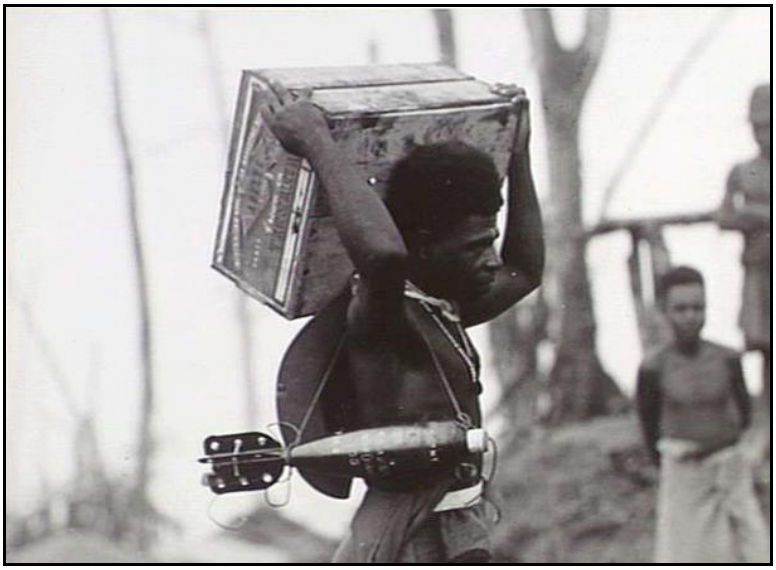

Figure 3 - Carrying supplies and a 4.2" inch mortar bomb – Bougainville, 1945 (AWM ID number 093399)

Figure 4 - Australian soldiers firing 4.2" mortar – possibly Innisfail, Nth Qld, c. 1945 (AWM ID number P05257.025)

