

**The landing of HSK *Kormoran* (1941) survivors at Red Bluff,  
Seventeen Mile Well, Quobba Station**

**2007 Red Bluff pistol find**

**and**

**Conservation and identification of Red Bluff pistol**



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**Cover: Finder Tom Goddard with pistol concretion at Red Bluff, June 2007  
(Jon Carpenter/ WA Museum)**

## **Acknowledgements**

The authors would like to thank Tom Goddard and his family for their interest and community-minded donation of the pistol to the Western Australian Museum, and to Tom for valuable assistance with the fieldwork including expedition planning, underwater photography and videography. Mack McCarthy conducted the initial liaison with Tom and the Goddard family regarding the report of the pistol and donation.

Thanks to Bruce Teede for following up information relating to the pistols with *Kormoran* survivor Fritz Engleman in Germany, and Glenys MacDonald for providing information on the pistol disposal based on her research of Jonathan Robotham's diaries and manuscript (Robotham was a German speaking Australian POW guard and intelligence officer who interviewed *Kormoran* survivors).

Thanks to Wendy van Duivenvoorde for her technical drawings of the remains of the pistol, which enabled accurate measurements of the angle of the cartridges in the concretion, Kalle Kasi for his excellent overlays and scaled images, which allowed positive identification. Jon Carpenter for his photography of the pistol remains (including underwater images and video recording of the site). Carmela Corvaia for packaging and transportation of the objects to the Department of Materials Conservation. Lucy Burrow for the compilation of the report including image editing.

## PART 1

### Background

During Easter holidays in 2007 nineteen year old Geraldton surfer Tom Goddard discovered the remains of a handgun while diving to search for lost fishing lures at Red Bluff, Quobba Station 130 km north of Carnarvon, Western Australia. The gun was discovered in a large hole in a submerged rock ledge just off the beach that is normally subject to a heavy surf or shore-break, requiring flat conditions (< 1 m swell) to access the site. Tom initially saw the glint of a shiny brass bullet cartridge, leading to closer inspection and the discovery of an apparently intact pistol. Tom removed the main body of material consisting of solid steel internal remains of the corroded pistol and four bullets (two still in their magazine), and advised the Red Bluff caretaker of his find.



**Figure 1:** Location of Red Bluff, Quobba Station, Western Australia





**Figure 2:** Tom Goddard and Ross Anderson at 17 Mile Beach  
(Jon Carpenter/ WA Museum)

Following discussions with Museum staff and contrary to advice received from others, Tom decided to report his find to the Maritime Archaeology Department, Western Australian Museum and donate the object to the State of Western Australia as an object of possible historic significance. Subject to authentication the find was deemed to have state and national significance as Red Bluff was a known landing spot for 57 survivors of the Schiff 41/ HSK *Kormoran* German raider ('HSK' trans. 'Handelshutzkreuzer' (trade protection cruiser) or 'Handelstorkreuzer' (cruiser for harassing merchant ships (Olson, 2000: 403)) that engaged the Australian light cruiser HMAS *Sydney* in a fierce battle off the Western Australian coast on 19 November 1941, and resulted in both ships sinking each other. The HMAS *Sydney* was lost with its entire 645 crew, while of the *Kormoran's* complement of 395 or 396 Germans and four Chinese men captured from the *Eurylochus*, 79 or 80 Germans and one Chinese were lost. (Winter, 1984: 254)

Tom also reported that 'half' of the pistol remained concreted onto a rock underwater at Red Bluff.

Following Tom Goddard's report, the Manager of the Western Australian Museum, Geraldton met Tom and his mother Debbie Goddard to hand over the pistol. The find was also reported to Geraldton Police who gave a permit for the pistol and munitions to be handled by the Museum conditional on appropriate expertise. Western Australian Museum conservators Kalle Kasi and Carmela Corvaia then received the pistol and munitions in Geraldton and brought them to the Western Australian Museum Department of Materials Conservation laboratory in Fremantle, Perth for assessment, identification and conservation.

## Historical information

### German raiders in Australian waters

#### World War I

Not having the power of the British navy nor able to match Britain's merchant fleet tonnage, German naval strategy had employed U-boats and disguised raiders in World War I to harass and cripple Allied war supply efforts. The daring and successful exploits of the World War I auxiliary cruisers *Möwe*, *Wolf*, *Emden* and *Seeadler* and their commanders were legendary. In Australian waters the raider *Wolf* sank the *Cumberland* off the coast of NSW, while the *Emden* was one of the most famous ships of World War I, sinking sixteen British ships and making daring raids on Madras and Penang harbours before being shelled by the HMAS *Sydney* I and run aground on North Keeling Island in the Indian Ocean with the loss of 134 crew.

#### World War II

When hostilities commenced in World War II, disguised auxiliary cruisers were again an integral part of German naval strategy to cripple British and Allied merchant shipping all over the world. Auxiliary cruisers also operated as long distance U-boat re-fuelling and re-supply ships with designated meeting points in remote parts of the world's oceans away from regular trade routes.

Between March 1940 and December 1940 six German raiders had been preying on Allied shipping worldwide. This 'first wave' of raiders were *Schiff 36* (*Orion*, 7021 tons), *Schiff 21* (*Widder*, 7851 tons), *Schiff 10* (*Thor*, 3862 tons), *Schiff 33* (*Pinguin*, 7766 tons) and *Schiff 45* (*Komet*, 3287 tons). Between them these raiders had sunk or captured fifty-four Allied merchant ships by December 1940 resulting in the loss of 366,644 tons to the Allied cause. During this time only *Schiff 10/ Thor* had been involved in engagements with the British in the form of the Armed Merchant Cruisers HMS *Alcantara* and HMS *Carnarvon Castle*, on both occasions damaging the British ships while escaping undamaged (Olson, 2000: 135-140).

Three of these raiders *Schiff 33/ Pinguin*, *Schiff 36/ Orion* and *Schiff 45/ Komet* had already been at work laying minefields and sinking ships in Australian, New Zealand and South Pacific waters between November-December 1940. *Schiff 36/ Orion* and *Schiff 45/ Komet* working in concert sank the *Holmwood*, *Rangitane*, *Triona*, *Vinni*, *Triadic*, *Triaster* and *Komata* in the Tasman Sea, Coral Sea and South Pacific (Olson, 2000: 140-141).

The *Pinguin's* successes in Australian waters included the sinking of the British ship SS *Cambridge* and USA's MV *City of Rayville* in Bass Strait by minefields laid from the captured Norwegian tanker *Storstad* (converted to a minelayer and renamed *Passat*).

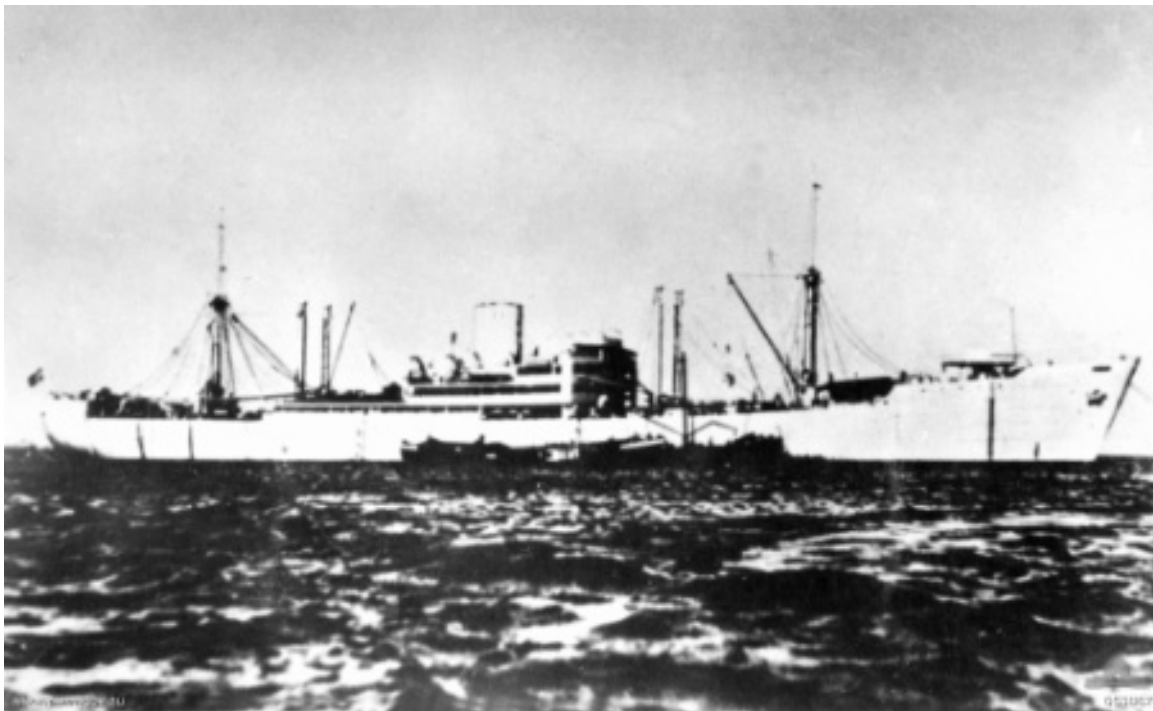
The *City of Rayville* was the first US vessel sunk in World War II, the USA being neutral at the time.

The *Passat's* minefields led to the closure of Bass Strait to shipping, and the subsequent wartime brownout of vessels and lighting at Port Phillip Heads indirectly caused the losses of the minesweeper HMAS *Goorangai* and interstate passenger steamship *Orungal*. The HMAS *Goorangai* was the first RAN surface vessel to be lost with all hands, when it sank in a night time collision with the *Duntroon* on 20 November 1940, almost exactly a year to the day before the loss of HMAS *Sydney*.

#### HMAS *Sydney* and HSK *Kormoran* battle

*Schiff 41/ HSK Kormoran* of 8736 tons commenced cruising on 3 December 1940 as the first of a second wave of German raiders. The *Kormoran* was a cargo ship previously named the *Steiermark* and was significantly modified to become the largest of Germany's armed raiders. It was armed with six 15cm main guns concealed behind hull plating and cargo hatches, five 2cm anti-aircraft guns, two 3.7cm anti-aircraft guns, four upper deck torpedo

tubes, two submerged torpedo tubes, 3m and 125cm rangefinders, a searchlight, smoke laying apparatus, an Arado 196 reconnaissance floatplane and a fast mine-laying boat. Specially modified diesel fuel tanks allowed up to a years cruising at an economical speed of eleven knots. Under its Captain Theodore Anton Detmers it left Kiel on 3 December 1940. (Frame, 1999: 51-54).



**Figure 3:** HSK *Kormoran*

At 1555 hours on 19 November 1941 *Kormoran* was on a course of 25° north in the Indian Ocean off the coast of Western Australia at position 26°34' S, 111°00' E. Detmers was planning to lay mines in the Geographe Channel, at the entrance to Carnarvon. However smoke from a ship soon identified as a cruiser (HMAS *Sydney*) was sighted. The alarm was raised and the ship cleared for action, and *Kormoran* changed course immediately to 260°. However, *Sydney* gave chase to the suspicious merchant vessel. Unaware of the secret code signal used by Dutch and British vessels, and after attempting to baffle the challenging cruiser with muddled signals, Captain Detmers could no longer hide under his disguise of the Dutch merchant vessel *Straat Malaaka*. At 1730 hours Detmers ran down the Dutch flag and hoisted the battle flag, and opened fire on the *Sydney* at a range of 1300 metres (Detmer's action report in Olson, 2000: 190-194). Between ten and fifteen salvos were fired by the *Kormoran*, the *Sydney* losing its bridge superstructure and Director Control Tower early in the battle, with the *Kormoran*'s second salvo presumably killing Captain Burnett and most of the senior officers on the bridge and disabling *Sydney*'s central firing control. Overall it is estimated that the *Kormoran* fired between 430 and 550 15cm shells at HMAS *Sydney*. Though most fell harmlessly into the sea there was devastating effect from an estimated 150 hits that struck at close range (Olson, 2000: 259; Winter, 1984: 139). Nevertheless, the crew of the *Sydney* returned fire independently from turrets, and well-aimed shells from Turret X caused the ultimate destruction of the non-armoured *Kormoran* setting the engine room ablaze (Winter, 1984: 137). One of two torpedoes fired by *Kormoran* struck *Sydney* on the port bow. German survivors reported their last sight of HMAS *Sydney* disappearing over the horizon on fire and down by the bow.

#### ***Kormoran* lifeboats and Quobba Station landing sites**

Following the battle, the *Kormoran* was left fiercely ablaze in the engine room and beyond saving. Captain Detmers reluctantly ordered abandonment of his ship and all hands to the

lifeboats. For the surviving *Kormoran* crew there was only the port cutter, a small lifeboat from the *Nicolaos D.L.*, two rubber dinghies, a workboat from the *Kulmerland*, and two steel lifeboats in the forward hold (that had to be removed by hand, block and tackle with the imminent danger of the explosion from the *Kormoran's* cargo of 300 mines). (Winter, 1984:141-142) The *Kormoran* survivors, many of them wounded and shocked, eventually took to the overloaded lifeboats and rowed away from the raider, which exploded and sank shortly afterwards.

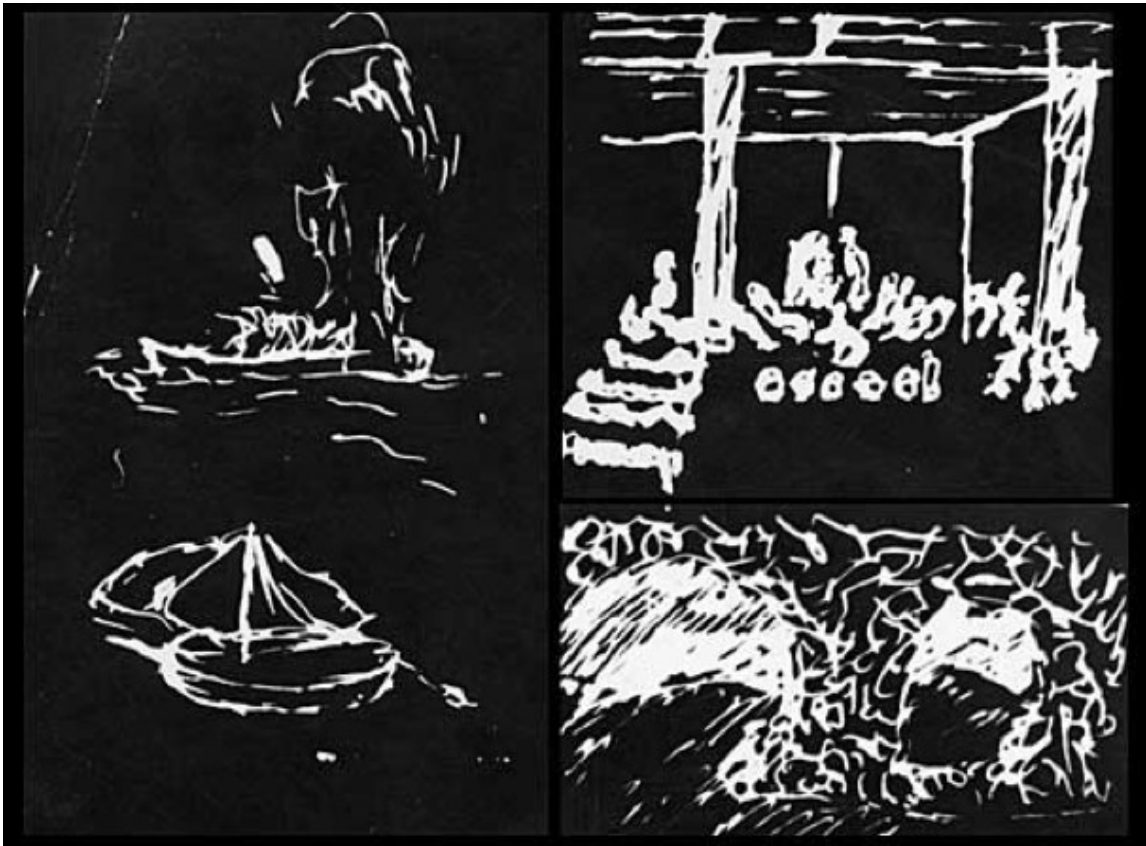
Between 23 and 27 November as the *Kormoran's* lifeboats drifted apart in ocean winds and currents they were spotted by RAAF aircraft searching for the overdue HMAS *Sydney*, and some of the lifeboats were picked up by the ships *Aquitania*, *Koolinda*, *Trocas*, *Centaur* and *Yandra* (Winter,1984:161).

On the morning of Monday 24 November 1941, 46 survivors from the port cutter commanded by C.P.O. Köhn landed at Seventeen Mile well, Quobba Station just north of Cape Cuvier (Montgomery,1981: 13; Winter,1984: 140-142, 151-152) where they drank from bore water stored in water tanks and killed two sheep, stewing one in copper water tanks cut in half (also described as air buoyancy tanks) from the boat. 'They ate one sheep as soon as it was stewed and hung another in a nearby shed for the next day' (Winter, 1984:152). After being spotted by an RAAF Hudson search plane, they awaited rescue with their sources of food and water. 'Their signal pistols were hidden under the saltbush where they could be retrieved, if necessary, but would not be readily found by anyone else'. (Winter, 1984:152)

The remains of the crumbling reinforced concrete water tanks and corrugated iron shed are still visible at Seventeen Mile well.



**Figure 4:** Seventeen Mile well shed, Quobba Station June 2007  
(Jon Carpenter, WA Museum)



**Figure 5:** Sketches by Dr Fritz List, War Correspondent and Propaganda Officer on *Centaur's* toilet paper showing clockwise a) HMAS *Sydney* ablaze b) *Kormoran* survivors c) *Kormoran* lifeboat under sail, d) Twin caves at Red Bluff. (Australian Archives, MP 1587, File 165K reproduced in Winter, 1984: 234)

The next morning on Tuesday 25<sup>th</sup> November, one of the steel lifeboats from the *Kormoran* containing 57 survivors (56 Germans and one Chinese crewman captured from the *Eurylochus*) landed on the beach at Red Bluff, Quobba Station.

The following secondary source references describe the Red Bluff lifeboat landing and subsequent events. Additional comments are provided in square brackets [...]:

'At dawn, they looked for a place to land. The northerly drift carried them past the first bay they chose [probably Cape Cuvier]. Then more cliffs appeared. Around the cliffs lay a bay open to the north-west. They were still in the boat when a Hudson swept overhead at about 0800 and banked around them before flying off. They beached the boat, landed their remaining supplies, and tried to massage feeling back into swollen feet. They laid out white jackets on the beach as a marker for the plane....In the cliffs above the beach, which was some 5 metres wide, was a sheltered cave with a floor of deep sand. There they took shelter from the sun and stretched out to sleep while their clothes dried.' (Winter, 1984:154).





**Figure 6:** *Kormoran* steel lifeboat at Red Bluff, November 1941  
(Gordon Ewers/ WA Museum Collection)



**Figure 7:** Stores and equipment in caves at Red Bluff, November 1941  
(Gordon Ewers/ WA Museum Collection)



**Figure 8:** Twin caves at Red Bluff, June 2007 (Jon Carpenter/ WA Museum)



**Figure 9:** View of pistol location marked by orange float in centre of picture (Jon Carpenter/ WA Museum)

Significantly, the Red Bluff lifeboat carried a large number of the *Kormoran's* officers, who might all have been expected to carry sidearms.

These officers were:

Administration Officer Lieutenant-Commander H. Bretschneider

Navigator Lieutenant-Commander H.C.M. Meyer

Radio Officer Lieutenant-Commander Graf R. von Malapert

Torpedo Officer First Lieutenant J. Greter

Second Medical officer Dr S. Habben

Ordnance Officer and official cinematographer Sub-Lieutenant W. Hrich

War Correspondent and Propaganda Officer Dr F. List.

(Montgomery, 1981:13)

When the Red Bluff survivors were spotted by the RAAF Hudson search patrol, Montgomery wrote that: 'Several of them had carried arms, but these had been jettisoned as soon as they had been first sighted.' (Montgomery, 1981:13)

'On 2 November 1945 Detmers informed the authorities that Dr List had hidden a 35mm Leica camera in a cave when he had come ashore at Red Bluff. When interviewed the following day, List confirmed this, claiming he had put a new film in immediately before the action began and that he had taken some thirty shots, which would give a complete record of the action...Sub-Lieutenant (now Professor) Ahl, who last year stated that all cameras were thrown overboard before they beached [at Red Bluff]'. (Montgomery, 1981:88)

Further references directly quoted that are relevant to the landing are:

'During the action with Sydney Dr List had taken approximately thirty shots of the various phases of the battle with a 30-millimetre Leica camera. The camera had been brought ashore by List and was subsequently buried in a cave or hole in the cliff face at Red Bluff. Detmers decided to inform the authorities of the existence of this camera...[believing that] the photographs would corroborate his claims and would perhaps satisfy the Australian authorities that he and his men had told the truth...List was questioned on 3 November and told the interviewing officers that the film included pictures showing the approach of *Sydney* to *Kormoran*; the firing of salvos by both vessels; damage to *Kormoran* from a direct hit; views of wounded personnel aboard *Kormoran*; and *Sydney* turning away in flames. It was considered that List was telling the truth, and the potential value of the film worth the effort of trying to recover the camera. Consequently, List was flown to Western Australia and escorted to the site. Although he was able to pinpoint the location, the camera could not be found.'(Olson, 2000:344)

'Around four o'clock a report from the lookout of truck movements across the high plateau aroused the sleeping camp to life anew....The awakened lifeboat Commander [Bretschneider] bethought himself first of his Luger pistol.....to the water's edge he went and by throwing his Luger to the far carry of his arm he changed his armed party to distressed seamen. That they may yet be proven pirates was no matter.'

(Robotham, n.d.:36)

'The sun was low in the west as Anderson and Piccles went down the steep track north of Red Bluff and walked along the beach. The men on the beach were taken by surprise; they had expected help to come from the sea. Hastily, revolvers were thrown into the sea beyond the breakers and documents destroyed. At the back of a sheltering cave, Dr List clawed out a deep narrow hole in the sandy floor and thrust his Leica down as far as he could reach, covered it and patted the sand smooth.' (Winter, 1984:157)

It is also recorded that a hidden Luger pistol was later found by the manager of Quobba Station (McDonald, G. to McCarthy, M., pers. comm., 7 May 2007). Further information is



that a Luger pistol was found 'up there' [Red Bluff] wrapped up in 'something' and had extra ammunition with it (Teede, B. to McCarthy, M., pers. comm.. 11 May 2007). This Luger pistol was handed in to WA Police Firearms Branch several years ago, its whereabouts is currently not known.



**Figure 10:** Luger pistol and ammunition said to have been found at Quobba Station  
(Image courtesy Bruce Teede)

Further information from a living *Kormoran* survivor Fritze Engleman is that:

‘..one of the officers on his lifeboat had this pistol and said he would have used it if the discipline on the boat got out of hand, as you could imagine tempers would have become a bit hairy by the time they were in the lifeboat. He said this officer threw the pistol in the water when we landed, his name was Deutschneider [sic -Bretschneider]. (Teede, B. to McCarthy, M., pers. comm. 6 September 2007)

In the days following the *Sydney/ Kormoran* battle a large search operation at sea and along the coast continued to search for survivors and wreckage. Four ships, the *Olive Cam*, *Heros*, *Wyrallah* and *Gunbar*, were involved. The *Heros* found an ex-R.A.N. Carley float that was recovered and is now in the Australian War Memorial, believed to be from the HMAS *Sydney*, while the *Wyrallah* found a German lifebelt (Winter, 1984:173-174). After the last day of the search, the *Gunbar* proceeded to Red Bluff to recover the *Kormoran* lifeboat and the *Gunbar*'s shore party recovered German stores left in the Red Bluff caves (Winter, 1984:177). Of these stores and the signal pistols buried by the Seventeen Mile well survivor party Winter writes:

‘If there had been a list of stores, *Gunbar* would have found quite a bit missing. Some of the Quobba folk had buried stores in the cave; after the navy left, these were quietly collected. They also found and kept the signal pistols Köhn's party had hidden, and had a fine fireworks display on New Year's Eve. Keith Baston [Quobba Station owner] asked the navy whether he could have the 17-Mile boat if he managed to salvage it. The navy, which had given up the job as too hard, said that, if he salvaged it, they would confiscate it. So it was left on the beach to rot, except for the sails, which someone removed.’ (Winter, 1984:177)

Of the secondary source historical accounts describing the actions of the *Kormoran* survivors, Winter refers to ‘revolvers’ (plural) being thrown into the sea at Red Bluff. Montgomery also refers to the ‘several who had arms’ jettisoning them, while Robotham (a German speaking *Kormoran* POW guard, subsequently promoted to an intelligence officer

and who interrogated many of the *Kormoran* survivors) in his diary describes only one gun being thrown, when Bretschneider threw his 'Lüger pistol' into the water beyond the breakers 'to the far carry of his arm' (Robotham, n.d.). Given the discrepancies in the references, the large number of officers in the Red Bluff lifeboat, and their known predicament in maintaining lifeboat discipline and attempting to land on an enemy shore it is logical that more than one gun was carried aboard this lifeboat. It is therefore possible that more than one gun was jettisoned after landing at Red Bluff.

#### **Red Bluff site inspection 4 – 7 June 2007**

Following Tom Goddard's report and receipt of the pistol at the Western Australian Museum it was decided that immediate field inspection was warranted as soon as weather conditions would allow, to investigate and possibly recover the remaining 'half' of the pistol. Tom described the remaining half of the pistol as still being at the bottom of a rock hole 'stuck to a rock' that could possibly be removed intact. The fieldwork planned to record the position and remains of the pistol *in situ*, as well as to determine if the remains of the pistol could be recovered as a significant relic in its own right, and also to see if it could provide further information to identify the weapon. Following historical accounts that described more than one handgun being jettisoned, a search would also be carried out for any further material in the rock holes. Following a period of waiting for suitable weather and low swell a trip was made between 4-7 June 2007.

Allowing two full days to travel up and back (4<sup>th</sup> and 7<sup>th</sup> June) from Fremantle to Red Bluff the 5-6 June were spent at Red Bluff. The trip was planned to take advantage of low swell conditions of between 5.1 – 9.6 ft (1.5–2.9m) open sea swell according to Buoyweather ([www.buoyweather.com](http://www.buoyweather.com)), and 1.0m swell according to Sea Breeze ([www.seabreeze.com.au](http://www.seabreeze.com.au)) and Ocean Outlook ([www.oceanoutlook.com.au](http://www.oceanoutlook.com.au)) forecasts and graphs for Gnaraloo area. Tom's knowledge and advice for predicting the suitable weather conditions was invaluable in the expedition planning.

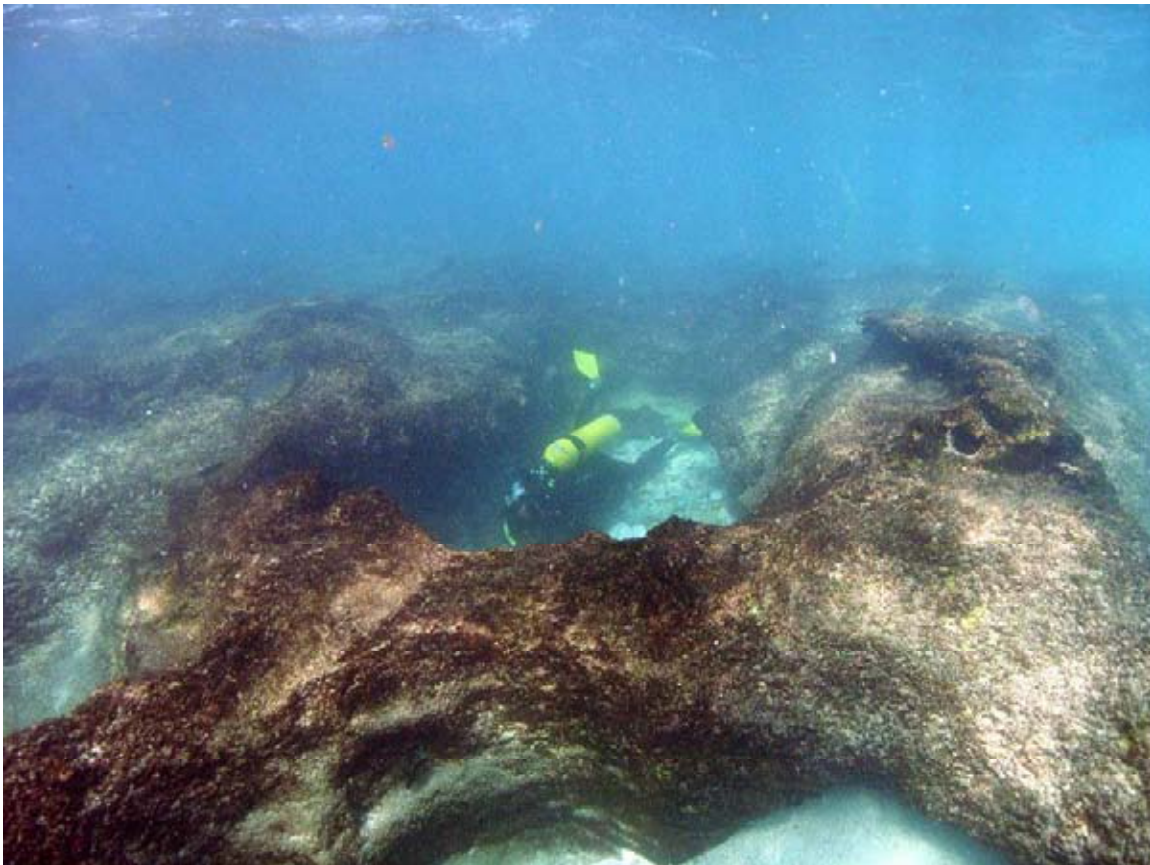
Personnel were:

Tom Goddard, finder

Ross Anderson, Maritime Archaeology Department, WA Museum (OIC)

Jon Carpenter, Materials Conservation Department, WA Museum

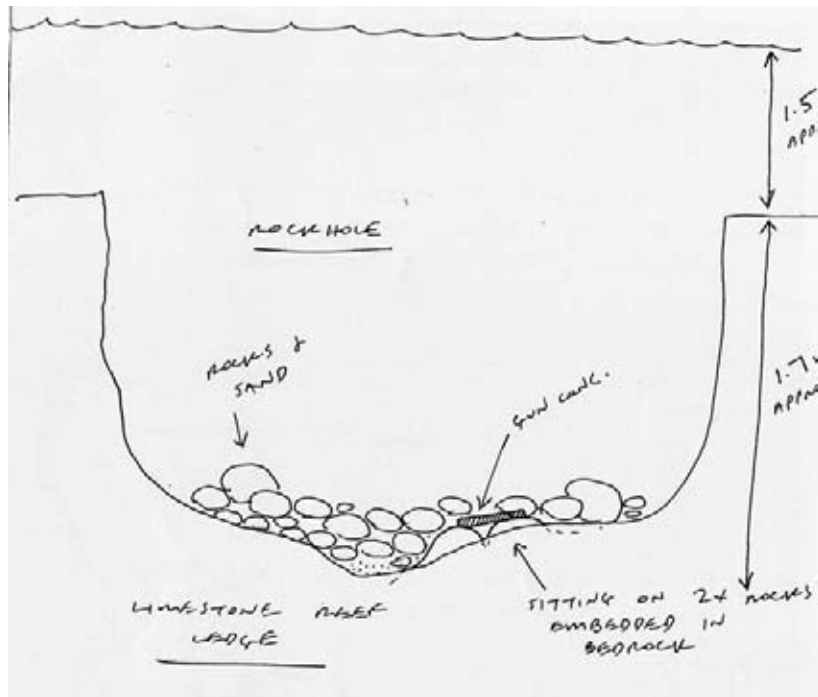
Site familiarisation was initially made by snorkel diving. The pistol was soon re-located by Tom, and photographed *in situ*. Direct tape measurement of the distance from the pistol to shore was 46.5m. The pistol had come to rest almost at the base of the hole in the rock ledge, surrounded by loose stones and pebbles, and lying in a water depth of 3.2–3.6 metres depending on tide. The depth of the hole in the limestone rock ledge is approximately 1.5m. The site is located off the beach in the corner where Red Bluff turns to project seaward. Low cliffs, with caves, are situated at the back of the beach and presently small boats are stored there out of the reach of waves. The submerged rock ledge is subject to a heavy break. On both days there was a 0.5-1.0 metre swell that resulted in surge over the site, but no break. On both days survey work could only be undertaken in the morning before weather conditions deteriorated, with onshore winds from the north and north-west affecting the site.



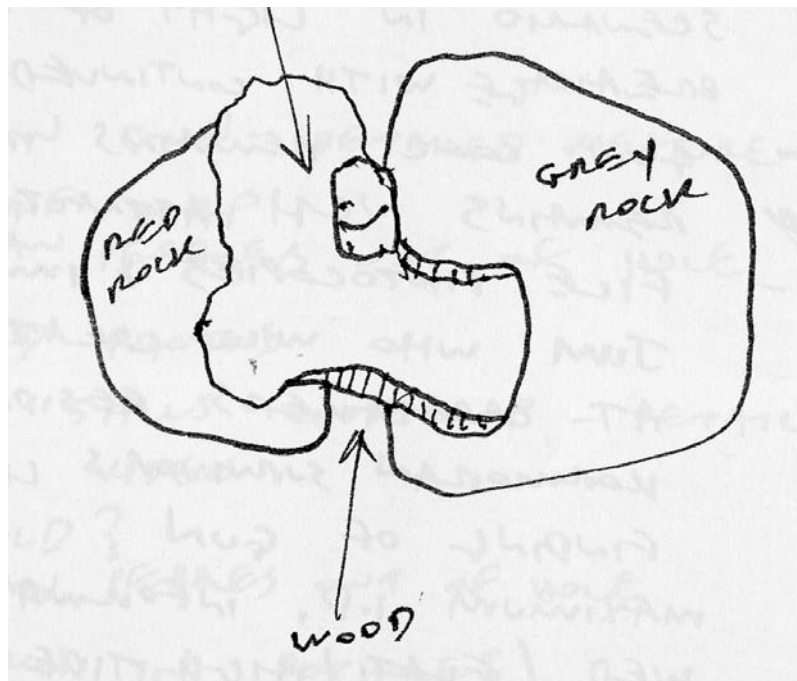
**Figure 11:** Diver working in pistol concretion rock hole in reef ledge.  
View looking south to shoreward. (Jon Carpenter/ WA Museum)

Close inspection of the site revealed that, following the removal of most of the solid metal frame and interior mechanisms by Tom, the remaining 'half' of the pistol in fact comprised mainly of concretion and iron corrosion products, and some wood. The concretion retains the impression of the form of the original pistol and is firmly attached to two individual stones that are embedded into the bedrock of the limestone ledge. The relatively thin layer of grey concretion also retains impressions of some of the pistol's internal components. Significantly there is surviving wood from the grip on the left-hand side of the pistol handle. Loose stones and pebbles that cover the base of the hole usually obscure the pistol concretion.

Following these observations it was apparent that recovery would not be as simple as first thought. The familiarization dive was followed by an attempt at recovery on SCUBA. Prior to the *in situ* inspection of the pistol, the recovery proposal decided upon was to isolate the concretion by chiseling around it, then undercut the plinth created and lift the concretion intact. Finding instead the concretion attached at the junction of two separate substrates meant that any independent movement would very likely cause the concretion to crack and come apart. An initial attempt to proceed with the proposal was curtailed following the discovery of the two substrates. At this stage, hand-tools (a geopick, hammer and chisel) were used to carefully chip away at the edge of the concretion to ascertain if it could be detached directly from the substrates. This was also curtailed as it was felt the concretion would be damaged. Following discussion at the surface it was decided to leave the pistol concretion *in situ*, and instead record it as thoroughly as possible.



**Figure 12:** Sketch of rock hole profile. Note pistol concretion sitting atop two rocks embedded in bedrock, and that pistol is not at base of rock hole. (Field Inspection Day Book)



**Figure 13:** Sketch plan of pistol concretion sitting on top of two rocks embedded in bedrock. (Field Inspection Day Book)

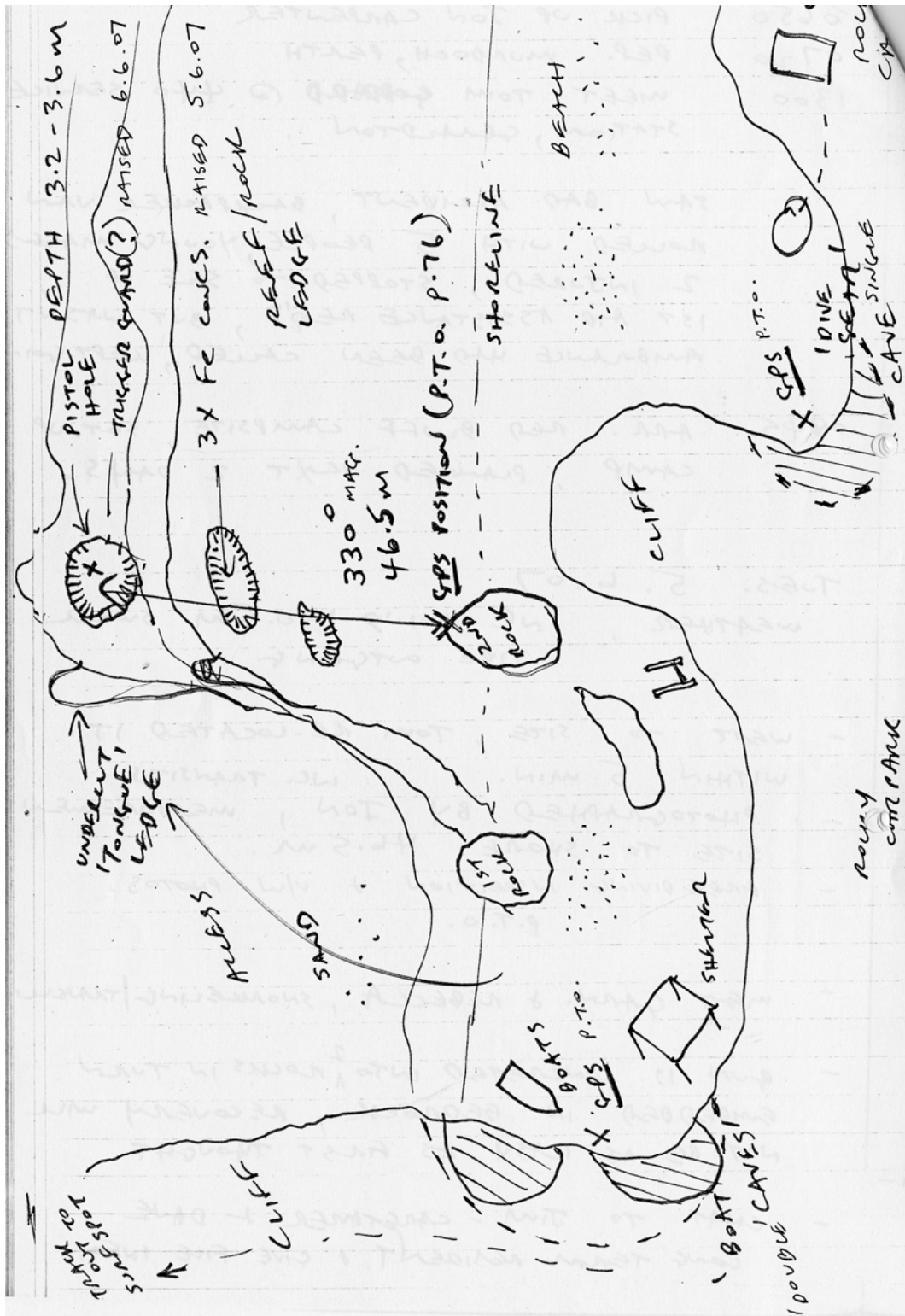
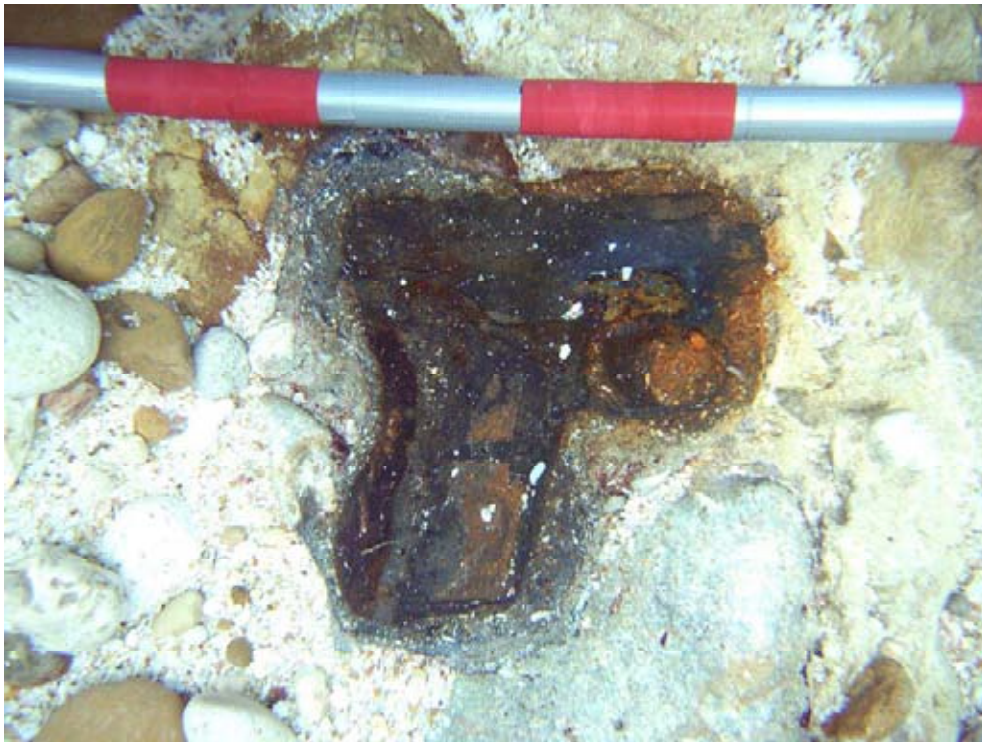
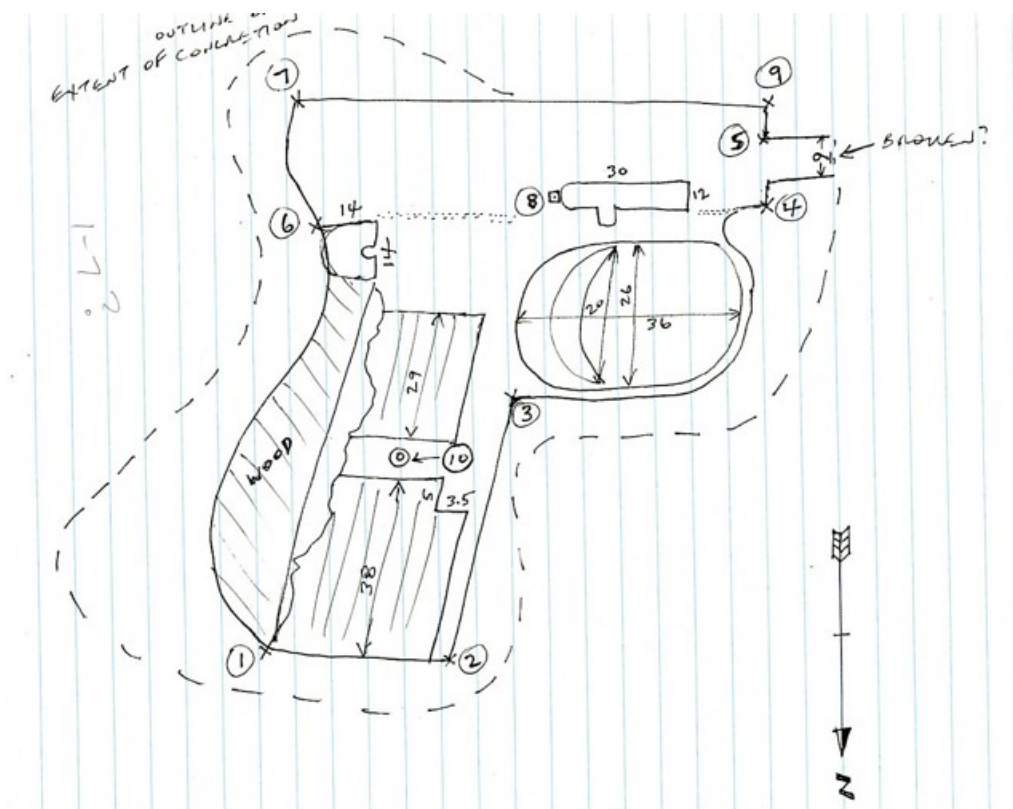


Figure 14: Sketch plan of pistol concretion underwater site location at Red Bluff. (Field Inspection Day Book)





**Figure 15:** Pistol concretion underwater. Scale is in 5cm gradations (Jon Carpenter/ WA Museum)



**Figure 16:** Underwater sketch of pistol concretion—note remnant wood on grip (Field Inspection Day Book)

A detailed drawing of the pistol concretion and its features was made utilizing plastic vernier calipers to acquire dimensions, in conjunction with recording by underwater digital photography and videography. A GPS position was recorded from the point on shore where a tape and compass measurement was made to the pistol position—46.5m 330°mag.—from the ‘toe’ of the second most seaward rock from the corner of the beach). Limited searches (due to time and weather constraints) were made of the surrounding holes in the rock ledge, with three iron concretions being found in the next hole shoreward. One piece of corroded curved steel that is possibly part of the trigger guard, was also found in the pistol hole (see Appendix VII) when the concretion was being covered up to limit potential damage from stones and pebbles rolling about. To protect the concretion, after recording, it was firstly covered with fine sandy sediments, then pebbles and the progressively larger stones. Transit images were taken from land and water viewpoints. An orange float was used to mark the location of the submerged hole in the ledge for this purpose.

The possibility of obtaining an impression of the pistol concretion, using 2-part epoxy putty (Selleys Aqua Knead It) or simply using plasticine, to take the mould was considered. However, the isolation of Red Bluff, and the distance to the nearest town, Carnarvon, obviated the possibility of obtaining these materials within the allocated time (though it remains a possibility for the future).

### **Site formation**

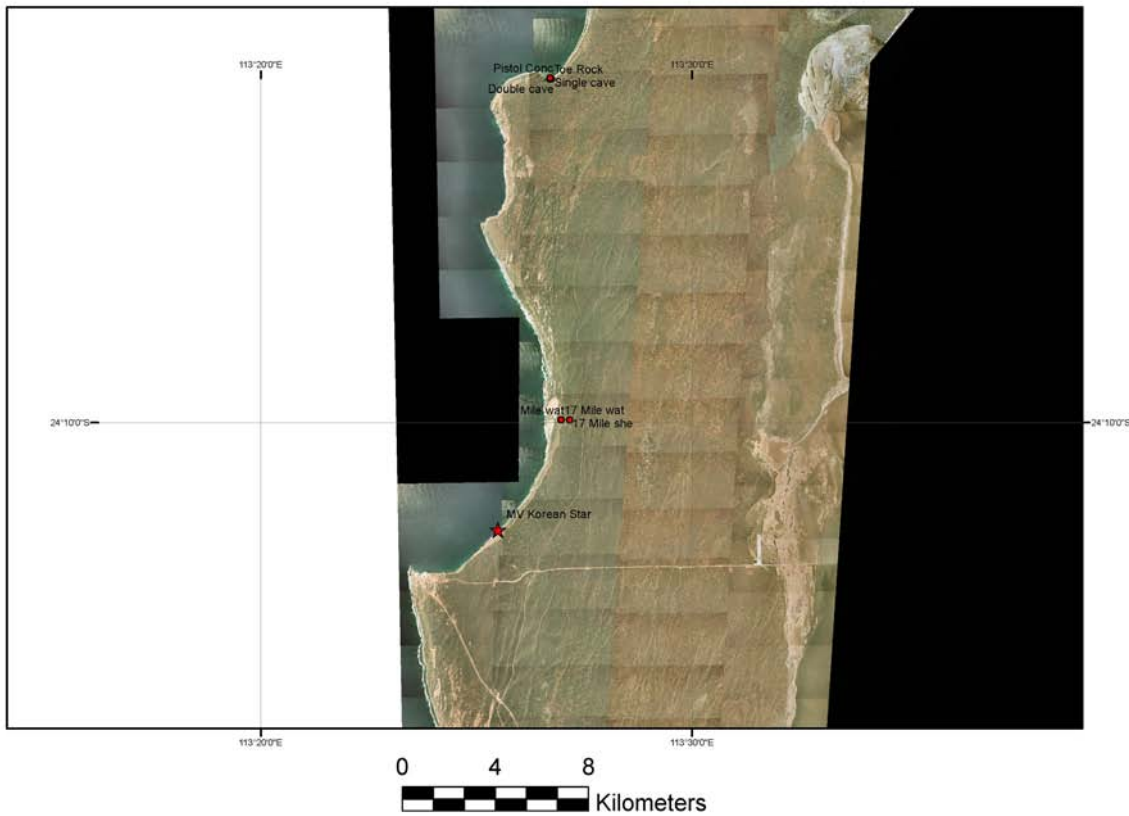
The site is an aggressive environment for the preservation of metal or organic material and it was therefore surprising to discover wood reasonably well preserved in its original shape.

The rock hole in which the pistol lies has at its base loose small rounded pebbles, rocks and coarse coral sand, creating an abrasive, high-energy environment as surge from swells and breaking waves cause the rocks and sand to move around, and even be bounced out of the rock hole.

The weight of the gun would have ensured that it either landed directly in the rock hole upon being thrown into the sea, or was washed into it soon afterwards. The position of the pistol is notable as it is not at the very base of the rock hole, nor on bedrock as might be expected, and is lying mesa-like atop two rocks. It appears that existing boulders and sand filling the hole—and perhaps the shape of the pistol—caused it to be trapped in this position. As the pistol initially corroded rapidly, marine concretion and corrosion products formed around the pistol, cementing it into position. It also appears likely that, as noted in this inspection, rocks and sand normally cover the pistol, buffering it to some extent from the elements.

It is likely that the pistol originally had a surface concretion layer protecting it, and this may have only recently been eroded and/or dislodged by rock and sand movement, exposing the upper internal face of the previously encapsulated pistol body and ammunition.

Such a relatively recent exposure would explain the presence of the wood still in the concretion. Wood fibres working loose from the wood grip were noticed during this inspection, and further natural processes such as abrasion are likely to destroy the remains of the fragile waterlogged wood grip relatively quickly. The cement-like concretion with its impression of the gun surface is likely to remain *in situ* much longer.

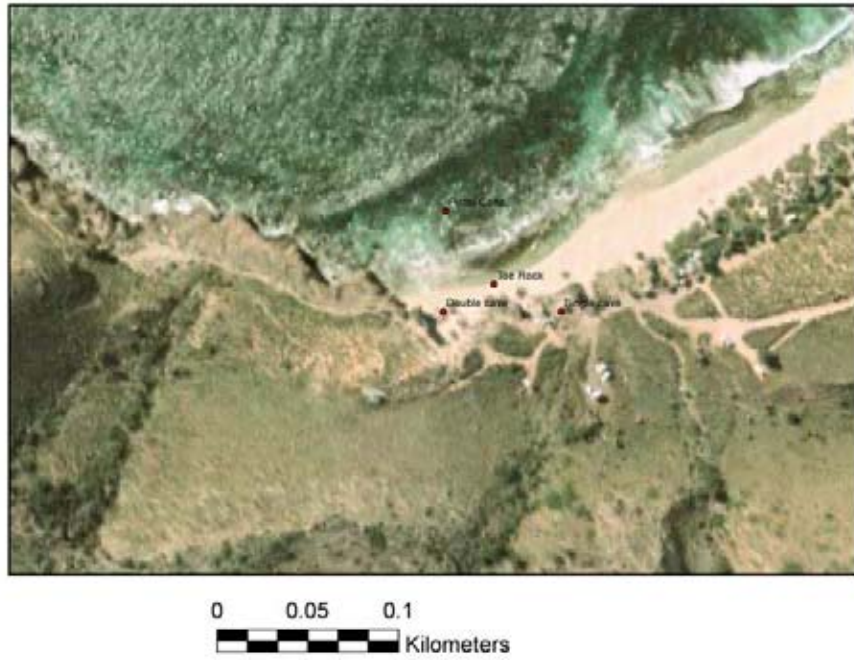


**Figure 17:** GIS map of Quobba Station area showing 17 Mile well and Red Bluff sites. The *MV Korean Star* shipwreck and *HMAS Sydney* memorial lie north of Cape Cuvier.



**Figure 18:** GIS map of Red Bluff area and sites





**Figure 19:** GIS map detail showing Red Bluff sites (Toe rock is measurement point for tape measurement to pistol concretion 46.5m)



**Figure 20:** GIS map detail showing 17 Mile well water tanks and shed

## PART II

### Conservation and identification of Red Bluff pistol Richard Garcia, Department of Materials Conservation



#### Background

The remains of the weapon were discovered by a 19 year old Geraldton resident whilst diving for fishing lures. They were donated to the Western Australian Museum (WAM) and transferred to the Department of Materials Conservation (WAM) accompanied by a Police Permit (No. T214465) [Copy - Appendix I].

#### Description of objects on arrival at the Conservation Laboratories

The objects were received by Richard Garcia (Manager, Technological Materials, WAM) on 14 May 2007. They were delivered in plastic bags filled with tap water. The remains of the weapon were in one bag and two loose rounds and other concretions from the site were in the second bag.

The remains of the weapon were heavily concreted but the two rounds embedded in the concretion were clearly visible [Figs: 21 & 22]. The four rounds recovered were “live” (primers intact).

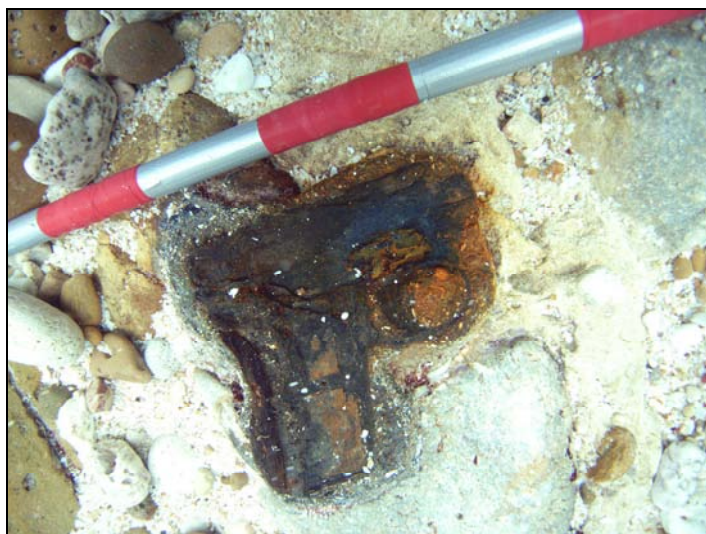


**Figure 21:** Front view of pistol remains and cartridges



**Figure 22:** Back view of pistol remains and cartridges

The weapon had been removed from the rock pool, by the finder, which resulted in the weapon being detached from its protective concretion. The impression of the other half of the pistol is still embedded in the rock at the Red Bluff site [Fig: 23].



**Figure 23:** Impression of pistol left in concretion

#### **Initial cleaning**

Before any identification procedures began, the remains were gently brushed with a soft brush to remove any loose sand and debris, although it remained heavily concreted. De-concreting of the object was necessary later to expose parts of the weapon that would help in its identification.

#### **Ammunition identification**

Ammunition identification was relatively straight forward being able to measure the calibre from the “loose” rounds. These measured at 7.65mm and are brass jacketed. Markings on the base of the rounds were as follows [Fig: 24].



**Figure 24:** Markings on recovered rounds



The company DWM began in 1896 in Germany as DEUTSCHE WAFFEN-UND-MUNITIONS FABRIKEN.AG (German Weapons and Munitions Factory). Wendy van Duivenvoorde (Assistant Curator, Dept. Maritime Archaeology, WAM) generated several computer assisted technical drawings of the remains of the pistol to enhance any distinguishing features [Appendix II].

### Pistol identification

Historical accounts state that the weapons thrown into the sea were “revolvers” and were “Lugers”, however, neither of these descriptions initially matched the weapon’s remains [Fig: 25].



**Figure 25:** 1917 Luger P.04 Navy Pistol

The angle of the hand-grip to the axis of the bore was measured from a photograph of a “Luger”, this measured at  $55^{\circ}(35^{\circ})$ , whilst the angle of the “Beretta” pistol measured at  $80^{\circ}(10^{\circ})$ . The measured angle of the two rounds, set in concretion, was  $80^{\circ}(10^{\circ})$ . The Beretta (Italian) model 935 was available in 7.65mm and issued to the Italian Air Force (marked AM – Aeronautica Militaire) and the Italian Navy (marked RM – Regio Marina) [Figs: 26 & 27].



**Figure 26:** Beretta 1934 Corto



**Figure 27:** 1934 Beretta Corto - Naval marking

Initially, on 25 June 2007 pistols relevant to the German/Italian services were inspected for similarities to what remains we had. Perusal of Japanese weapons [Fig. 28] was also undertaken but these were discounted as no similarities could be identified. Concentration centred on the German/Italian models [Figs: 25 & 26].



**Figure 28:** Range of Japanese pistols

Underwater archaeological inspection of the recovery site provided evidence of wood remaining in the hand-grip area. This tended to discount the Beretta and narrow the search to 1934 model Mauser pocket pistol. [Figs: 29 & 30] It should be noted that production of the 1934 model continued through to later years - without a serial number the exact date of manufacture cannot be ascertained.



**Figure 29:** View of wrap-around wooden handgrip on Mauser pocket pistol.



**Figure 30:** Side view of wooden handgrip on Mauser pocket pistol.

### Conservation treatment

It was apparent that as de-concreting continued more of the components of the weapon would be revealed, which would in turn, lead to a more positive identification [Figs: 31-34]. Concretions removed around the top slide and frame revealed not only a more pronounced outline but the return spring, rod, firing pin and spring. The barrel section was also de-concreted sufficiently to show some remains of the rifling.



**Figure 31**





Figure 32

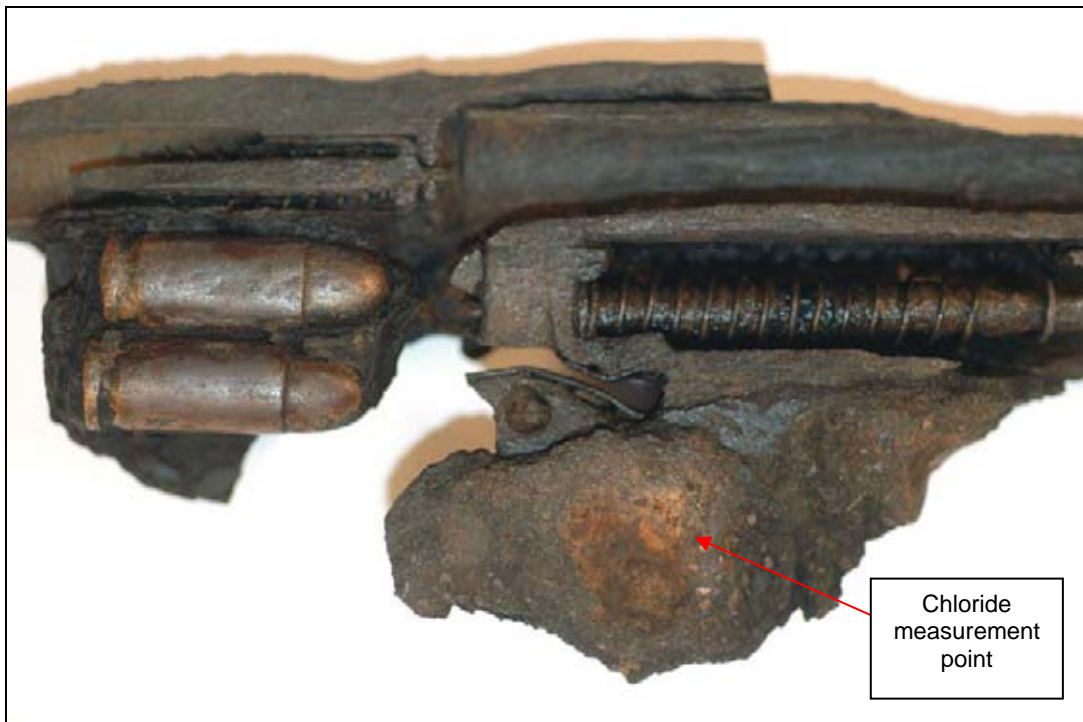


Figure 33



**Figure 34**

There were no rounds chambered. No attempt was made to remove the concretion holding the two remaining rounds in place on the object [Figs: 35 & 36].



**Figure 35**





**Figure 36**

The 1934 Mauser (German) pocket pistol had a magazine capacity of 8 rounds. Since only 4 rounds were delivered to the WA Museum further rounds could be on the recovery site, or have gone missing due to site formation processes, or been fired before jettisoning. Further inspection of the site should be conducted to:

- Ascertain other evidence, i.e. rounds
- Take a mould of the impression in the rock – this may also reveal markings not found on the object itself

After further de-concreting and cleaning, photographs were taken by Jon Carpenter (Conservator, Dept. Materials Conservation, WAM) and the clearer outline and detail allowed us to superimpose this image on a photograph of a 1934 Mauser pocket pistol. This image fitted perfectly, thus eliminating the “Beretta” pistol theory.

Scaled down images by Kalle Kasi were superimposed over an “exploded” view of a 1934 Mauser pocket pistol and these matched perfectly [Appendices III & IV].

Further deconcreting allowed the return spring to move along the rod, located the trigger pin and remains of the trigger in place, along with the trigger spring intact and in good condition. Most of the remaining concretion is in a fragile and friable condition and great care must be taken to ensure that the two “concreted in” rounds do not break away.

The remains of the pistol are currently soaking in a 2% (w/v) solution of sodium carbonate. On 17 August 2007 chloride readings were taken on the following: (a) the solution itself (540ppm); (b) the concreted area surrounding the remains of the trigger and trigger spring [Fig: 35] was 370ppm and (c) the metal on the top slide [Fig. 31] gave a reading of 263ppm. Desalination continues.

There are still no positive identification marks or serial numbers located but the following is evidence that the remains are a part of a 1934 Mauser pocket pistol [Fig: 37]:

- Angle of rounds embedded in concretion matching 1934 Mauser
- Calibre of weapon
- Distinctive one piece wooden wrap around handgrip
- Matching parts on “exploded” view of 1934 Mauser and recovered weapon (Appendices III & IV)
- Scaled overlays matching 1934 Mauser Pocket Pistol
- Location of recovered weapon



**Figure 37**

### **Display**

Display of the remains of the weapon along with the two rounds (live) embedded in the concretion raise some questions.

### **Display alternatives:**

1. Display as is.
2. Display after removing the live rounds without destroying the concretion, remove the projectiles from the cartridge cases, empty the contents for analysis, reassemble projectiles to cartridge cases and replace in concretion.
3. Remove rounds from concretion, remove propellant, fire primers and replace in concretion.
4. Remove all concretion, render rounds innocuous as per point 3 and re-orientate rounds into the object (further discussion required).

### Part III

#### Legal status of the pistol

A case could be made for the pistol to be declared by the Commonwealth Minister for Environment and Water Resources by special declaration under Section 5 (2) of the Commonwealth *Historic Shipwrecks Act 1976* as a 'particular article that was... associated with a ship':

Section 5(2) Where the Minister is of the opinion that a particular article that was, or particular articles that were, associated with a ship, or all articles that were associated with a particular ship, being an article that is, or articles that are, situated in Australian waters or in waters above the continental shelf of Australia, is or are of historic significance, the Minister may, by notice published in the *Gazette*, declare the article or articles to be a historic relic or historic relics.

(<http://www.comlaw.gov.au/ComLaw/Legislation/ActCompilation1.nsf>)

At this stage this statutory protection has not been resorted to.

Historic material relating to the HMAS *Sydney* and HSK *Kormoran* battle is widely viewed as historically and socially significant in nature, due to the limited number of objects in collections such as the Australian War Memorial and Western Australian Museum.

Tom Goddard donated his find to the WA Museum and therefore at the present time the pistol, munitions and other artefacts have been accessed into the WA Museum collection. They are protected by Section 9 (ba) of the *Museum Act 1969* being within the scope of the WA Museum's activities to collect, preserve, research and display objects for the benefit of the community:

(a) to encourage, and to provide facilities for, the wider education of the community of the State, through the display and other use of collections and through knowledge derived from collections;

(b) to make and preserve on behalf of the community of the State collections representative of the Aborigines of the State, the history of exploration, settlement and development of the State, the natural history of the State and such other collections which the Trustees think necessary for the wider understanding of those matters and for the educational function of the Museum;

(ba) to preserve on behalf of the community any remains, wreck, archaeological or anthropological site, or other thing, whether in the place it is discovered or elsewhere, which in the opinion of the Trustees is of special national or local interest;

(c) to aid the advancement of knowledge through research into collections and into other such matters as the Trustees think relevant to that purpose and by publishing the results of the research.

(Section 9, *Museum Act 1969*)

## **Discussion and conclusions**

The archaeological evidence of the pistol and identification process has provided conclusive evidence for it being a 1934 Kriegsmarine issue wrap-around wooden handled 7.65mm caliber Mauser, and discounted the possibility of it being a revolver, a 7.65mm or 9mm Luger, or other make of pistol used by axis forces.

The 1934 Mauser is known to have been issued to Kriegsmarine officers in World War II. The pistol's discovery in close proximity to caves at Red Bluff is consistent with historical information about the jettisoning of gun(s) by at least one *Kormoran* officer. Therefore there is little doubt that the pistol is directly associated with the landing of the *Kormoran* survivors at Red Bluff.

The original location of the pistol 46.5 metres from shore is consistent with the described behaviour of the German officer(s) including Administration Officer Lieutenant Commander H. Bretschneider throwing his/ their pistol(s) 'beyond the breakers' (Robotham, n.d.) transforming the Germans' position from being an armed landing party of invaders into a party of distressed shipwreck survivors. The action would also have ensured that the pistol did not fall into enemy hands, and so represents a form of resistance even in surrender. In terms of shipwreck survivor behaviour, this action is a unique archaeological signature found in the context of war, and a consequence of being cast upon enemy shores.

It is possible that further evidence of the *Kormoran* survivors exists in the Red Bluff area, although the deep sand in the caves is scoured out by large swells and cyclones. There is a possibility that fragmented artefactual material may have been re-deposited with wave action. There has been a report of non-authentic Leica cameras or replicas being buried in the cave in modern times to determine where the original camera ended up (A. Boyd, pers. comm., 23 October 2007), and hence the possibility of contamination by modern or similar non-authentic materials must be considered.

There also remains a possibility that fragmented artefacts such as other pistols and bullets, or other buried, jettisoned or smashed/ destroyed material such as stores, binoculars or other equipment exist in the Red Bluff rock holes.

## Recommendations

1. That the pistol concretion be left *in situ* to remain as part of the underwater cultural heritage of Red Bluff, and is recognized as having historic significance to the State of Western Australia in relation to the HMAS *Sydney* and HSK *Kormoran* battle, and *Kormoran* survivors' landing at Quobba Station.
2. That the recovered pistol remains and munitions are protected by the Western Australian *Museum Act* 1969 as relics of state significance.
3. That the pistol concretion and landing site(s) of the *Kormoran* survivors be protected as a maritime archaeological/ heritage site.
4. That interpretive material and information, including this report of the *Kormoran* survivors' landing and Tom Goddard's find of the pistol, is provided to the Manager, Quobba Station, Caretaker, Red Bluff campsite, Carnarvon Shire and Carnarvon Historical Society to provide information to locals, tourists and regular visitors to the site.
5. That future fieldwork in the area conduct further detailed searches of rock-pools at Red Bluff both visually and using an underwater metal detector, and to obtain a mould of the pistol concretion.
6. That the pistol is conserved, the live munitions are rendered safe, and interpretive materials are prepared for the purpose of exhibition to the general public.
7. That the feasibility of conserving the 17 Mile Well hut on Quobba Station as a site associated with the *Kormoran* survivors' landing is investigated by local heritage groups.

**COPY**

Original (white) Licence Holder  
 Duplicate (green) File Copy  
 Triplicate (yellow) Book Copy

**Form 17**  
**WESTERN AUSTRALIA**  
**Firearms Act 1973**

**T 214465**

**TEMPORARY PERMIT**

**THIS PERMIT AUTHORISES THE HOLDER**

NAME WA MUSEUM - GERALDTON (AND STAFF)

ADDRESS FORESHORE DRIVE GERALDTON Post Code 6530

to possess and carry, or ~~to possess, carry and lawfully use~~ the following firearms and ammunition DATE OF BIRTH —

Description (include action)	Make	Serial Number	Calibre
4 ROUNDS OF UNKNOWN CALIBRE AMMUNITION IN POOR CONDITION	N/K	N/K	N/K
/			

Owned by FOUND, RELIC.  ORIGINAL ISSUE Licensed by —  RENEWAL PERMIT

For the period commencing on the 3 day of MAY 2007  
 And expiring on the 30 day of MAY 2007

For the purpose of HOLDING WHILE VERIFYING AUTHORITY TO HOLD PENDING EXAMINATION & CLARIFICATION OF.

Applicant's Signature \_\_\_\_\_

**APPLICABLE RESTRICTIONS, LIMITATIONS OR CONDITIONS**

Receipt No. 1209060 Issued for fee \$ 45-00

This 3 day of MAY 2007

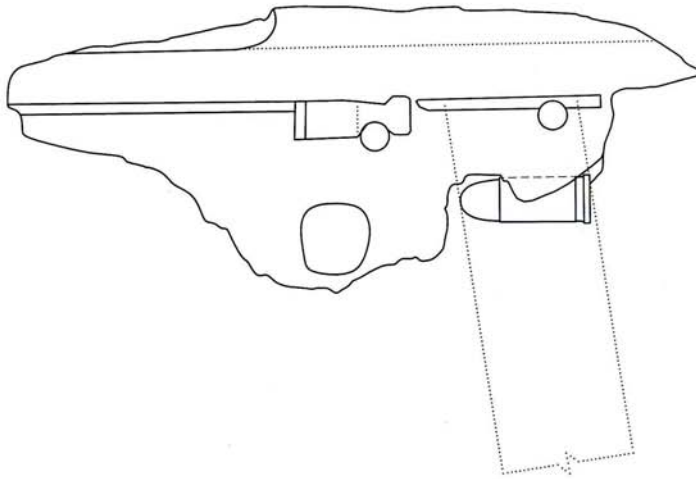
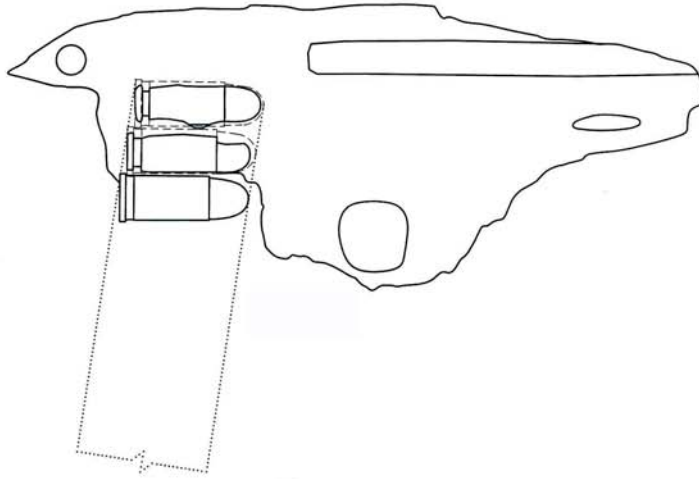
POLICE STATION GERALDTON POLICE STATION (print clearly)

[Signature] 5849 3/5/07  
 A MEMBER OF THE POLICE AUTHORIZED BY THE COMMISSIONER REGIMENTAL NUMBER DATE OF ISSUE

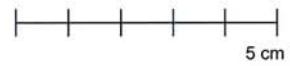
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**Pistol**

WA Museum  
May 15, 2007



By *Wendy van Duivenvoorde*







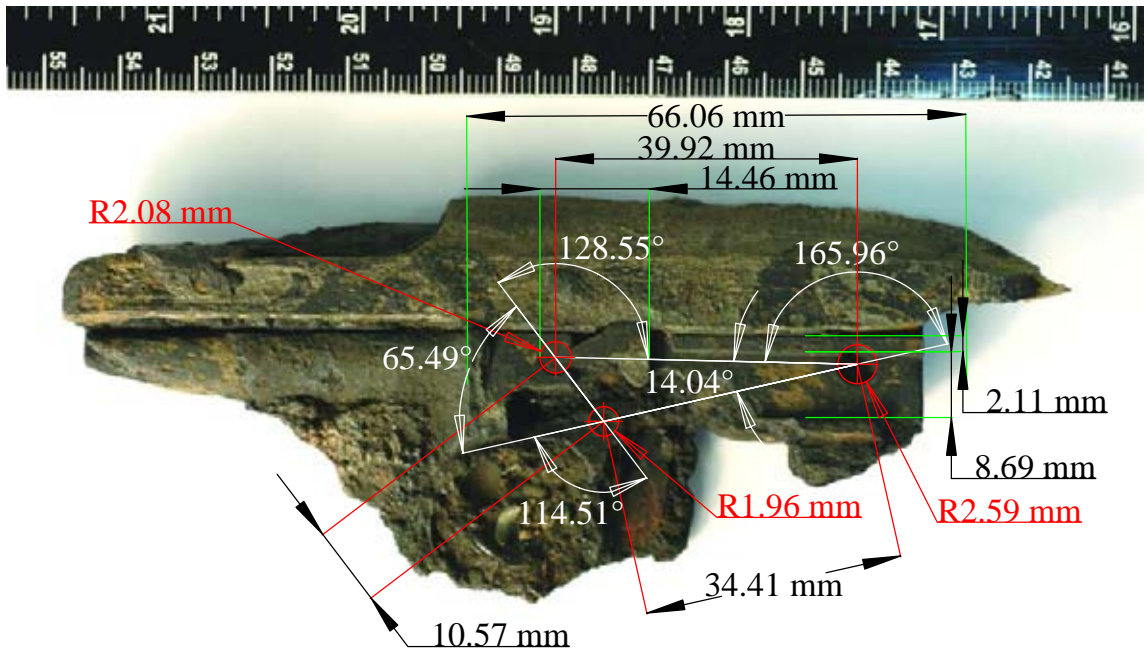












	Identification of the remains of a pistol found at Red Bluff, Western Australia 2007			
	TITLE Measurements of Red Bluff pistol remains			
SIZE A4	CAGE CODE	DWG NO 1	REV	
SCALE 1:1	SHEET 1			

*Der Taschenpistole  
Waffenfabrik Mauser/Oberndorf a.N.  
Modell 1934*



	Identification of the remains of a pistol found at Red Bluff, Western Australia 2007		
	TITLE 1934 Mauser pocket pistol, calibre 7.65 mm		
SIZE A4	CAGE CODE	DWG NO 2	REV
SCALE 1:1	SHEET 1		1

**Appendix IV**





**Appendix IV**



**Appendix IV**





Appendix IV

Overlay 3 of 6

**Appendix IV**




**Appendix IV**




**Overlay 1 of 6**





		Identification of the remains of a pistol found at Red Bluff, Western Australia 2007		
		TITLE Pistol remains identification by comparison		
SIZE	CAGE CODE	DWG NO	3	REV
A4				
SCALE	1:1		SHEET	1



		Identification of the remains of a pistol found at Red Bluff, Western Australia 2007		
		TITLE Pistol remains identification by overlay		
SIZE A4	CAGE CODE	DWG NO 4	REV	
SCALE 1:1			SHEET 1	

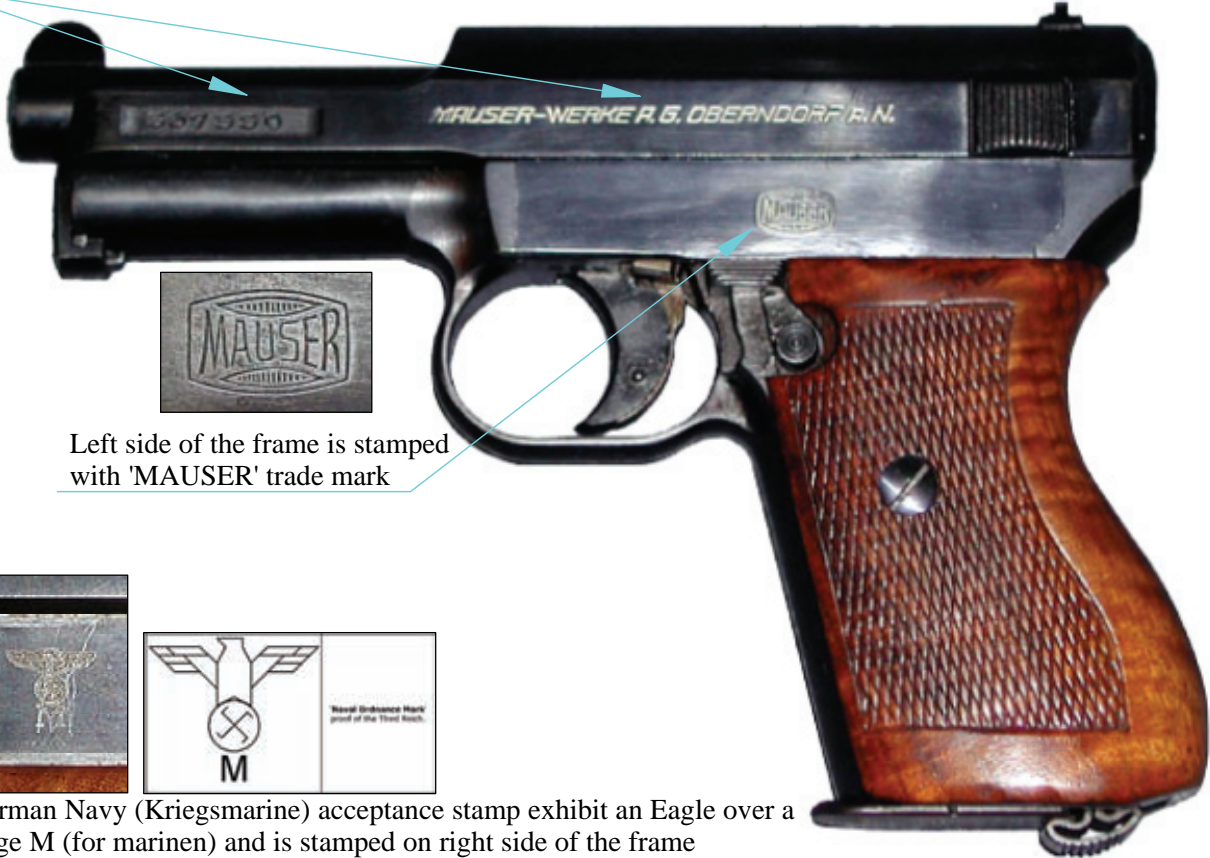
**MAUSER POCKET PISTOL 1914\34 - 7.65mm (.32 ACP)**

1. First introduced in 1914 (Revised in 1934)
2. Manufacture date: July 1914 to 1939
3. Action: Blowback\striker
4. Length: 152mm (6.1")
5. Height: 112mm (4.5")
6. Pistol weight, magazine empty: 595.3g (21oz)
7. Pistol weight, magazine full: 652g (23oz)
8. Empty magazine weight: 48g (1.75oz)
9. Thickness: 27mm (1.1")
10. Length of line of site: 127mm (5")
11. Cartridge: 7.65mm (.32 ACP)
12. Weight bullet: 4.795g (74 grains)
13. Charge of nitro powder: 0.2g (3.08 grains)
14. Muzzle velocity: 348m/sec (1142 feet\sec)
15. Muzzle energy: (148 foot\lbs)
16. Penetration:
  - in pine at 10 yds., 4.5"
  - in pine at 25 yds., 4.4"
  - in pine at 50 yds., 4.25"
17. Shot pattern:
  - at 10 yds., 1.4" circle
  - at 25 yds., 3.4" circle
  - at 50 yds., 5.75" circle
18. Eight-round magazine (nine-shot if one in chamber).
19. Wrap-around walnut grips.
20. Markings (These can vary):
  - (a) Manufacturer: Waffenfabrik Mauser A-G.Oberndorf A.N.Mauser's Patent
  - (b) Serial number: Stamped on back end of frame, front left side of slide. Last three numbers only on takedown rod catch and internal parts.
  - (c) Mauser logo stamped on side plate, left side of gun, above grip.
  - (d) One small crown, over another small crown, over a U on front right side of slide.

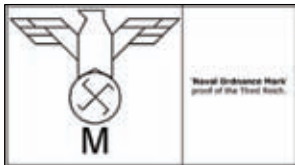
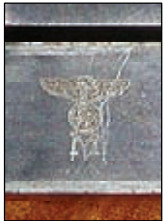
Reference: [www.recguns.com/Sources/IIIC2m2.html](http://www.recguns.com/Sources/IIIC2m2.html)



The left side of the slide displays 'stamped Serial Number' and Mauser-Werke A.G. Oberndorf a.N. (in one line)



Left side of the frame is stamped with 'MAUSER' trade mark




German Navy (Kriegsmarine) acceptance stamp exhibit an Eagle over a large M (for marinen) and is stamped on right side of the frame



The right side of the slide displays Cal.7,65 and D.R.P.v.A.P. (in one line)



The 'Mauser Model 34' issued to the German Navy (Kriegsmarine) were sometimes marked with either an N. number or O. number stamped on the front part of the grip. This indicates a fleet inventory number of either the North Sea (Nordsee) fleet, or the East Sea (Ostsee) fleet respectively.

	Identification of the remains of a pistol found at Red Bluff, Western Australia 2007			
	TITLE Markings on Ostsee Fleet Mauser 1934			
SIZE A4	CAGE CODE	DWG NO 5	REV	
SCALE 1:1	SHEET 1		1	



**APPENDIX VI**  
**GPS Positions of HSK *Kormoran* survivor related sites, Quobba Station**  
**(Datum: WGS84)**

Toe of rock used to measure distance from shore to pistol concretion, Red Bluff	S 24.0337° E 113.4453°
Pistol concretion (underwater site), Red Bluff	S 24.033336° 113.445061°
Double cave, Red Bluff	S 24.033833° E 113.44505°
Single cave, Red Bluff	S 24.033833° E 113.445633°
17 Mile shed	S 24.165733° E 113.452633°
17 Mile water tank #1	S 24.165733° E 113.4494°
17 Mile water tank #2	S 24.16565° E 113.449383°

**APPENDIX VII**  
**Red Bluff, Quobba Station pistol artefact registrations**  
**QS = Quobba Station**

Registration	Description and notes
QS5104	Gun - body of 1934 Mauser pistol with two bullets <i>in situ</i> in magazine and two loose bullets. Bullets are 7.65mm calibre and have 'DWM K 479A' on cartridge cases. Found Quobba Station, Red Bluff in rockpool 46.5m off beach in 3.2m depth. Finder: Tom Goddard. Date found: 9 April 2007
QS5105	3 x iron concretions, one large with hole through middle and two small all found in next rockpool shoreward from gun QS5104, approx. 40m off beach in 3m depth. Finders: Jon Carpenter and Tom Goddard Date found: 5 June 2007
QS5106	Fragment of steel in fishhook shape (though does not appear to be a fishhook), possibly remnant of trigger guard of gun QS5104. Found in rockpool 46.5m off beach in 3.2m depth In same rock hole as pistol QS5104. Finder: Jon Carpenter Date found: 6 June 2007



**FIG:** QS5105 three iron concretions and QS5106 steel artefact  
 (Jon Carpenter/ WA Museum)



**FIG:** QS5105 detail (Jon Carpenter/ WA Museum)

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Winter, B., 1984, *H.M.A.S. Sydney: fact, fantasy and fraud*, Booralong Publications, Brisbane.

## Web sites

<http://www.comlaw.gov.au/ComLaw/Legislation/ActCompilation1.nsf>

[http://fgsinc.8m.com/photo\\_8.html](http://fgsinc.8m.com/photo_8.html)

<http://www.berettaweb.com/Beretta%2034/Beretta%2034.htm>

<http://carbinesforcollectors.com/Italianauto.html>

<http://carbinesforcollectors.com/nambu.html>

<http://www.auctionarms.com/search/displayitem.cfm?itemnum=7997016>

<http://world.guns.ru/handguns/hg191-e.htm>

<http://www.recguns.com/Sources/IIIIC2m2.html>