

The Pacific Campaign 1942-45

Introduction

To come to any understanding of the complexities or issues involved in this most momentous naval conflict in the history of mankind, it is essential to grasp the sheer size of the area involved. It is pointless trying to define it just in terms of miles or kilometres. The average human cannot comprehend such distances. But what we can all understand is time, or the time it takes to move between two points on the globe. I live in northern New Zealand. It took me two hours, in a Jumbo 747, to cross the Tasman Sea, making landfall in southern Australia, and then a further four hours to cross from coast to coast to Perth in Western Australia. A journey of around 3,000 miles. In 1944, it took a DC3 sixteen hours to fly from Norfolk Island (north of Australia) to Auckland New Zealand, via the east coast of Australia. This is a journey of around 2,000 miles. These journeys, although quite long, represent only a quarter of the distance needed to travel the entire length of the Pacific battlefield.

The weather is another factor that requires some understanding. The southern regions of the Pacific are in general similar in weather to that which one might expect in England or North America. But once the central Pacific is reached there is a complete change. Typhoons, feared by man and beast alike cause giant winds to burst across land and sea with a fury that has to be experienced to be comprehended. Everything, including war ceases during such events. 60-70 foot waves batter ship and shore in the path of the storm. Even aircraft carriers and battlewagons find such weather difficult and potentially dangerous. Unlike a continental climate similar to that found in Europe or America, the Pacific can change in a matter of hours as weather front after weather front brings quite sudden and dramatic change. Both Japanese and Allied naval forces used weather fronts to obscure their movement where ever possible.

The difficulties of navigation, especially by aircraft across such vast tracts of water without modern navigation aids cannot be understated. The average fighter aircraft of the period did not carry suitable equipment for such long flights. Both New Zealand and Australian airforces had extensive pre-war experience in the Pacific and had learnt that single seat aircraft required a bomber with them to ensure accurate navigation. This became a standard operating practice for all Allied airforces (Navy, Marine and Airforce) in this theatre. It was common for a single Hudson or Ventura light bomber to escort a fighter group to the target and back. Similarly the Japanese airforces sent fighter cover with a bomber group, relying on the bombers to navigate for the fighters.

Ships did not experience the same problem, but they also had their difficulties. The seas of the Pacific had not been well explored or indeed mapped, before the war. Certainly the main shipping routes were well charted, but the war ranged across the whole region into areas that were virtually unknown to any but the locals.

Supply remained a constant problem for both sides during the campaign. The US forces had the longest re-supply route reaching from San Francisco on the US west coast, via Hawaii, through Fiji and on into Auckland or Sydney. Later in the war as the central Pacific was reconquered, the re-supply line ran directly from Hawaii to the various island groups. This explains why the US land forces in the Pacific were significantly smaller than those in Europe. It took approximately four times the logistic effort to support a man in the field in the Pacific Theatre as it did in the European.

With the above in mind, I have constructed a campaign series that covers the major naval battles of the period 1942-45. I have deliberately excluded the early battles between the pre-war colonial powers and Japan on the basis that they were such one sided affairs it is almost pointless wargaming them. This does not suggest they are in anyway insignificant, only in wargaming terms the outcome is an almost mathematical certainty.

Background.

The Japanese had begun the process of modernising their industrial infrastructure soon after the end of WW1. They realised it would require an uninterrupted supply of iron ore, oil and rubber to

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achieve this. To this end they began by forging close links with South American suppliers of ore and petroleum. However, by 1924, the Americans and British had determined that Japanese industrial expansion would pose a threat to US and British colonial possessions on the Malayan Peninsula and the Philippines. To this end Plan Orange was formulated. By 1938 that plan had become a blue print for the coming war in the Pacific. At the commencement of the Pacific Campaign, the Japanese naval and air forces were the largest in Asia. Their cruiser and destroyer designs were the most advanced in the world and their 'Long Lance' torpedo soon proved to be the scourge of many naval engagements. The three primary naval aircraft with which Japan entered the war were superior in almost every respect to their western counterparts, having been specifically designed to fight over the vast tracts of the Pacific. However, like all aircraft design, there is compromise in order to achieve design specification. The Japanese decided armour plate and self-sealing tanks were both unnecessary given the agility of their fighters and the weight restrictions imposed on carrier aircraft. The Japanese realised that many battles would be fought at night or in reduced visibility – a common problem in Asia – and trained their navy accordingly. To this end they set about developing binocular and range finder optics specifically designed for low light conditions. This explains their success in night actions during the Guadalcanal campaign.

By the commencement of hostilities in December 1941, Japan possessed the best and most experienced navy in Asia. It was also the equal of any other in the world. The Japanese were pioneers in naval aviation and kept a close watch on both British and American developments. Yet, like their opponents, the Japanese Navy clung to the notion that battleships would prove to be the decisive weapon at sea. It was not until 1943 that this was to change, but by then it was far too late for Japan to correct the balance of their naval construction programme.

Much has been made of the inferiority of Japanese pilots in the final two years of the war, the lack of training and combat experience being cited as the cause. This is only partially true. As the Allies closed in on Japan they devoted a large part of their resources to strangling the Japanese supply lines. This resulted in serious fuel shortages and a dramatic decline in the quality of aviation gasoline. This decline in quality caused a marked drop in engine performance thus preventing many aircraft from reaching the altitude at which the American B29 operated and when they did, they invariably failed to intercept, being unable to catch them. This had even more profound consequences in fighter combat. The Allied aircraft, being heavier, only bettered the Zero above 15,000 feet due to supercharging and large capacity inline engines. The Japanese had opted for radial engines, being much more rugged in combat than the inline water-cooled units. However, the smaller Nakajima Sakae engine performed better at lower altitudes, a fact American pilots were to discover as they attempted to dog fight the infamous Zero. Once the fuel quality began to deteriorate the margin between the aircraft over the range of altitudes began to shrink, thus the venerable F4F that was retained on the small escort carriers (CVE's) remained competitive even with the later marks of Zeros.

To further compound Japanese problems, the Allies introduced a new aircraft gun sight that enabled the user to accurately compute the amount of lead required in deflection shooting. This made average shots good shots and good shots great shots. The introduction of this gun sight probably had a major effect on the outcome of what in mid 1944 American carrier pilots dubbed the 'great Mariana's turkey shoot'.

However, it was the invention of radar that ultimately gave the Allies a significant advantage over their opponents. In October 1940, the Royal Navy met with the US Navy to exchange technical information on radar and associated equipment. The Royal Navy had introduced the Combat Information Centre (CIC) system during WW1 in which all combat information came to a central point within the ship to be evaluated and acted upon. With the invention of radar, the system gained long range air and surface search capabilities unavailable in the pre-war period. The Japanese had also adopted this system pre-war, but never combined radar plotting within the CIC as had the Allies. The importance of radar cannot be overstated. It allowed air commanders sufficient lead-time to meet incoming raids with an appropriate response and more importantly

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allowed them to husband scarce resources during critical phases of the battle. By 1944, both sides possessed reasonably reliable air and surface search radar, but only the Allies possessed gunnery radar control linked to AA weapons. Coupled with the variable time fuse (VT) it allowed the Allied AA defence to detonate each round at a particular range established by Radar. This increased the percentage of hits against enemy aircraft by a considerable margin.

Given the above parameters we can apply a number of historical modifiers to the campaign.

1. Japanese night fighting techniques allowed them better target spotting and gunnery control before December 1942. All Japanese torpedo fire at night will have a +1 added to the dice roll.
2. Between the period December 1941 and December 1942, the Japanese player will add +1 to all dice resolving combat using the Zero.
3. After December 1943, the Allied player will add +1 to dice rolls resolving combat against all Japanese aircraft.
4. After June 1944, Allied AA fire dice rolls will be increased by +1 to simulate the effect of radar control for AA fire and the use of the VT fuse.
5. Japanese ships operating within the sight of land in the Philippines or Papua and New Guinea, will have an additional spotting roll made against them to simulate the presence of Allied Coast Watchers. This will be a single D6 roll of 4,5, or 6 to locate a group of ships passing close enough to be seen.
6. Aircraft availability and replacement:
Each USN or British carrier will roll 1D6 for each type of aircraft available to its Carrier Air Group (CAG). The number rolled will be the number of aircraft counters taking part in the attack. US carrier groups of two CV's and two CVE's usually relied on the larger CV's to form the attack formation and the CVE's to supply the CAP over the carrier group. When assembling a CAP, a 1D6 is rolled per carrier. The CVE's usually operated F4F's and TBF's - for reconnaissance.

Each Japanese carrier will roll 1D6 per aircraft type contained within their Naval Air Group (NAG) in the same manner, except that the fighters not used to escort an attack formation, can be used for the CAP. When launching a CAP, a 1D6 is rolled to establish the number of aircraft counters available.

Due to the ranges involved and the time taken to assemble, fly to the target and then recover the aircraft from a raid, it was usually only possible to conduct two raids during daylight hours. The principle factor in the raid cycle was distance to target. Therefore if the target is between 200 and 330 miles, only one raid per day is permitted. If it is between 150 and 200 miles, two raids are permitted. If it is less than 150 miles, then as many raids as there are available aircraft are permitted.

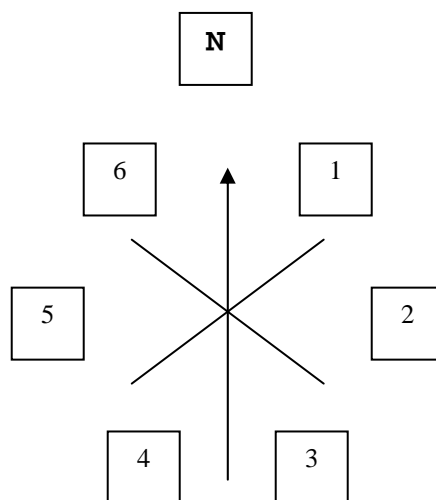
Individual aircraft losses are undefined. No distinction is made between lost or damaged. Either way they are removed from combat. As aircraft counters are removed from combat due to enemy action, they become available for redeployment after 24 hours. A 1D6 is rolled for the total number of aircraft counters being returned as replacements. The number indicated is the number of counters received. Players may choose whichever type of counter they wish, but they may not exceed the historical establishment of the aircraft type they select.

Beginning 1943, US carrier forces add +1 to their dice roll, +2 at the beginning of 1944 and automatically replace all losses after the beginning of 1945.

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Japanese players suffer a -1 replacement dice roll penalty at the commencement of 1943 and a -2 at the commencement of 1944. From the beginning of 1945 no replacements are available to the IJN.

Locating the target



Players determine the angle of approach of their forces in relation to each other using the above sector system. In order to detect an enemy force, the opposing player must roll the correct number for the sector that represents the correct direction of approach. The arrow head represents a compass heading of north and players should determine the sector their force occupy based on the arrow head facing a constant northern alignment

Reconnaissance and air raid track – once target has been located.

Once the correct direction of approach by the enemy has been determined, it is then necessary to determine at what range they were detected. This is achieved by both players rolling a series of dice, starting with a range of 330 miles. This represents the longest practical range at which an airstrike could be conducted. Both players roll 1D6. If either scores a '6' they have succeeded in locating the enemy force at 330 miles from the locating forces' present position. If there are separate forces attempting to locate the same target, each force must make a separate dice roll.

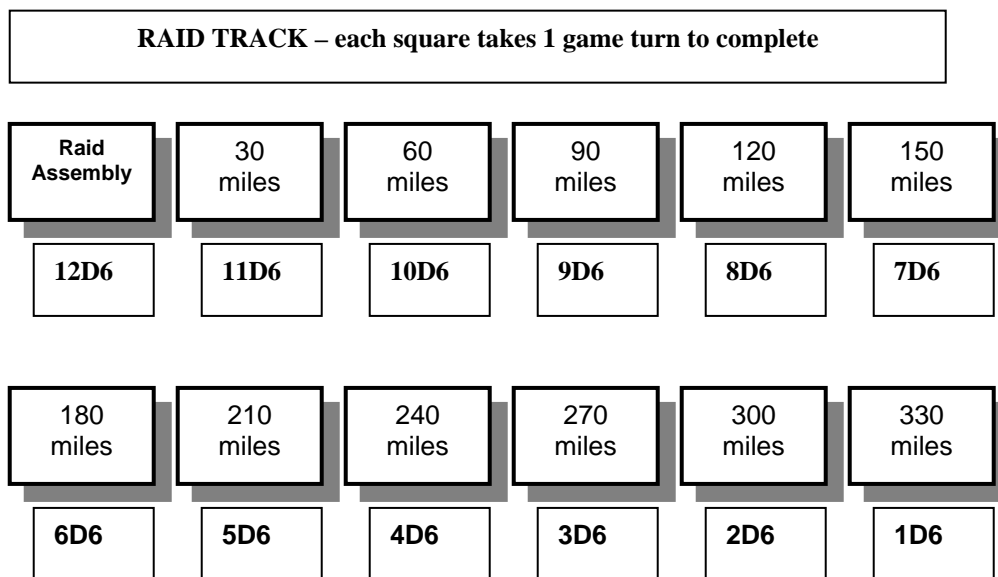
Once the first player rolls the required '6' it fixes the range at which the two forces are separated. The second player continues to roll until they also achieve the required '6'. The number of dice rolls it takes the second locating player to roll a '6' is the number of game turns delay between the launching of that players' air attack against the target, as opposed to the first player.

Example:

The first player rolls a '6' on first attempt. He locates the target at 330 miles and fixes the distance between the opposing forces at 330 miles. This requires 12 game turns (about 3 hours real time) to assemble a raid and arrive at the target. The second player fails to roll the required '6' on any

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dice rolls until he rolls 6D6. This means that he is six game turns behind the first player in launching his attack against the opposing player. Both players assemble and launch their raids and follow the raid track from launch to 330 miles (12 game turns each) with the second player starting down the raid track six moves after the first.



Shore based targets.

Where naval forces are involved in firing against land targets the following rules apply. Players should bear in mind that there is a significant difference between land artillery rates of fire and ship rates of fire. Ships contain sophisticated mechanical loading systems that allow for much higher rates of fire to those of land-based artillery. Hence the difference in the number of dice rolls between shore and sea based artillery. In general, each land based artillery battery rolls 1D6 per gun within the battery. Land targets require a '6' on any firing roll to be hit and destroyed. Players don't roll a second dice to assign 'damages'. Buildings and facilities should have a number of damage/defense points assigned to each. It requires a '6' to remove each damage/defense point. Once a target has lost all its defense points it is destroyed. In general I recommend that facilities such as generators should have 6 defense/damage points. Gun batteries, one point per gun. Radar and radio aerials are difficult targets to hit and should be ignored for the purpose of the game. General buildings such as huts and accommodation blocs have only 1 defense/damage point each. Underground facilities and strong points are more difficult to damage and they should range from 4 to 10 defense/damage points, depending on their size and level of protection.

Airfields are large complexes and can absorb significant damage before they become un-operational. I would suggest 12 points for small, 16 for medium and 24 for large. Once an airfield has sustained 50% damage, it becomes un-usable. Land targets are not repaired in the same manner as ships. Land targets are repaired once they cease to be attacked. Repairs are completed in the same manner as ships in that 1D6 is rolled and the number indicated is the number of damages repaired. Only one repair attempt is made in a 24- hour cycle.

Aircraft – (bombers only) attack land targets in the same manner as they attack shipping. 4D6 for bombs, requiring a '6' to achieve a hit and cause one point of damage. Fighters may be used to suppress AA fire. Each fighter marker will suppress 4 AA guns in a battery, thus preventing the

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AA battery from engaging the bombers. AA fire against fighters will be assessed in the same way as AA fire against any other aircraft.

The Attack on Pearl Harbour

The following special rules cover the attack on Pearl Harbour on 7th December 1941. The number of AA weapons available to the defenders is unknown. To further complicate matters the US forces were in a peace time state and many batteries would not have had an ammunition allocation or been completely outfitted for war time conditions. Therefore we must make an educated guess as to the readiness of the shore based defenses. The principle AA shore batteries were of the 3 inch caliber, backed up by 40mm (2pdr) Bofors guns and .50Cal heavy machineguns. The 3-inch batteries were hand loaded therefore suffered a reduced rate of fire to that of their navy counterparts that were mechanically loaded. Most of the early ship and shore based heavy AA guns were hand loaded. Accordingly I have allocated an AA factor of 6D6 per target location.

AA fire dice rolls against aircraft targets will be as per the AA rules but a '5' on any dice roll will result in the aircraft counter being removed as 'driven off' taking no further part in the action.

Air attack damage.

Airfields subjected to attack require no D6 roll to hit the target, for obvious reasons. Each attacking aircraft counter rolls 1D6 and the number rolled equals the damage points inflicted.

Torpedoes against anchored targets.

The normal torpedo attack rules apply with the following modifications. 1 or 2 rolled and the torpedo misses the target. 4,5 or 6 and the torpedo hits the target. Roll for a 'sink test' as per the rules then roll for the number of damages per hit, as per the rule. The number of damages, even if the target is sunk, represents the number of months the vessel remains under repair after salvage.

Air attacks against airfields.

Airfields have a basic defense value and an additional value for the aircraft based upon them. Attackers roll 4D6 per attacking aircraft counter and any '6' causes the loss of airbase defense points. In addition, the attackers roll for each type of aircraft based at the airfield. 1D6 per type of aircraft. Each '6' rolled, represents the destruction of 1 type of aircraft counter.

In the case of Pearl Harbour the following defense values apply.

Wheeler airfield 3 fighter points
Ewa airfield 3 fighter points
Kaneohe airfield 2 fighter points
Hickham airfield 5 fighter, 2 bomber points

Note: The attacks on airfields took place during the first raid. Any surviving fighters may therefore engage the second wave arriving an hour behind the first.

Part 1

The Battle of the Coral Sea 4th – 8th May 1942

This was to be the first major encounter between the Allied and Imperial Japanese naval forces. It was important for two reasons.

1. It was only the second time in modern history a Western and Asian fleet had contested a major surface action.

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2. It was also the first time in history that two fleets had met in battle and not seen each other. The whole action was fought between competing air fleets as opposed to ships.

The Japanese has occupied the island of Truk in the Caroline Island group and built a formidable naval base sitting astride the Central Pacific. This was a direct counter to the American presence on Hawaii at Pearl Harbour and at Midway Atoll 1500 miles to the north-west of Hawaii. In the push south through Indo-China, The Japanese had occupied Rabaul in the New Ireland Group and constructed a heavily fortified naval garrison and harbour. The Allies were therefore forced to make a circuitous approach via Tahiti and Fiji to Australia and New Zealand. The New Hebrides and New Caledonia were hastily occupied by Allied forces in an effort to prevent further Japanese expansion into the South West Pacific, which threatened the North East coast of Australia and New Zealand.

Prior to the opening of hostilities with Japan, the Australians had embarked on a programme of establishing a greater presence in Papua- New Guinea and on the Malayan Peninsula. Accordingly a large air and naval base was built at Port Moresby on the southern coast of PNG to guard the Australian Northern Territory. This relied on Darwin for re-supply and support. Thus the Coral Sea became an important gateway for both the Japanese and Allies in the pursuit of their strategic objectives.

The Japanese had determined they would construct an airfield complex on the island of Guadalcanal in the Solomon Island Group. The Allies only discovered the existence of this base by accident during March 1942. They also attempted to put a major seaplane base at Tulagi on Florida Island, which is directly opposite the site they chose for their airfield on Guadalcanal. The Allies were determined to remove the Japanese from these locations and occupy them as part of the Allied strategy to re-conquer the Philippines. A major plank of the MacArthur plan for South West Pacific Theatre of Operations.

The Japanese axis of advance into the Coral Sea can only occur from the northern (via Truk) and western (Rabaul) sides of the map.

The Allies are free to arrive from the south-west (via the New Hebrides or New Caledonia), from the west (via Townsville in Australia) or from the west (via Darwin in Australia)

Players must remain constantly aware that the Battle of Midway is one month into the future and resources will need to be husbanded for this event. The Japanese Imperial Fleet had already issued orders for the attack on Midway and the occupation of the Aleutian Islands before the Battle of the Coral Sea had commenced. The carriers in particular were expected to support the occupation of Guadalcanal and Tulagi and then return to Japan Home Waters for inclusion in the coming attack on Midway and the Aleutian Islands.

Order of Battle- Operation 'MO'

Imperial Japanese Navy

Carrier Striking Force (Takagi)

Shokaku 21A6M2 Zero 21 D3A Val 21 B5N Kate

Zuikaku 21 A6M2 Zero 21 D3A Val 21 B5N Kate

C.A. Myoko, Haguro

Destroyer Div. 7 Ushio, Akebono

Destroyer Div. 27 Ariake, Yugure, Shiratsuyu, Shigure

Oiler. Toho Maru

Tulagi Invasion Force (Shima)

Minelayers. Okinoshima, Koei Maru

Transport. Azumasan Maru

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Destroyer Escort. Kikuzuki, Yuzuki.

Port Moresby Invasion Force (Kajioka)

CL Yubari

Destroyer Escort. Oite, Asanagi, Uzuki, Mutzuki, Mochitzuki, Yayoi

Transport Unit. Unknown number of ships.

Support Group. (Marumo)

CL Tenryu, Tatsuta

Kamikawa Maru

Gunboats. Keijo Maru, Seikai Maru, Nikkai Maru

Covering Group (Goto)

CVL Shoho 12A6M2 Zero 9 B5N Kate

CA. Aoba, Kinugasa, Kako

Destroyer Escort. Sazanami

Submarine Force.

Unknown at this time.

US and Allied Forces

Task Force 17 (Fletcher)

Task Group 17.2 (Attack Group) (Kinkaid)

CA Minneapolis, New Orleans, Astoria, Chester, Portland.

Destroyer Escort. Phelps, Dewey, Farragut, Aylwin, Monaghan

Task Group 17.3 (Support Group) (Crace)

CA Australia, Hobart, Chicago.

Destroyer Escort. Perkins, Walke

Task Group 17.5 (Carrier Group) (Fitch)

CV Yorktown 21 F4F 38 SBD Dauntless 13 TBD Devastator

CV Lexington 23 F4F 36 SBD Dauntless 12 TBD Devastator

Destroyer Escort. Morris, Anderson, Hammann, Russell

Task Group 17.6 (Fuelling Group) (Phillips)

Oilers. Neosho, Tippecanoe

Destroyer Escort. Sims, Worden

Task Group 17.9 (Search Group) (DeBaun)

Seaplane Tender. Tangier (with 12 PBY-5 Catalina)

2nd Naval Battle of Guadalcanal

Night of 14-15 November 1942

Order of Battle

US Navy Forces

Task Force 64 (Lee)

BB 56 Washington

BB57 South Dakota

DD416 Walke

DD397 Benham

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DD379 Preston
DD433 Gwin

Imperial Japanese Forces

Emergency Bombardment Force

Sentai 11 (Kondo)
BC Kirishima

Direct Escort
DD Hatsuyuki
DD Asagumo
DD Teruzuki
DD Shirayuki

Sentai 4 (Kondo)
CA Atago
CA Takao

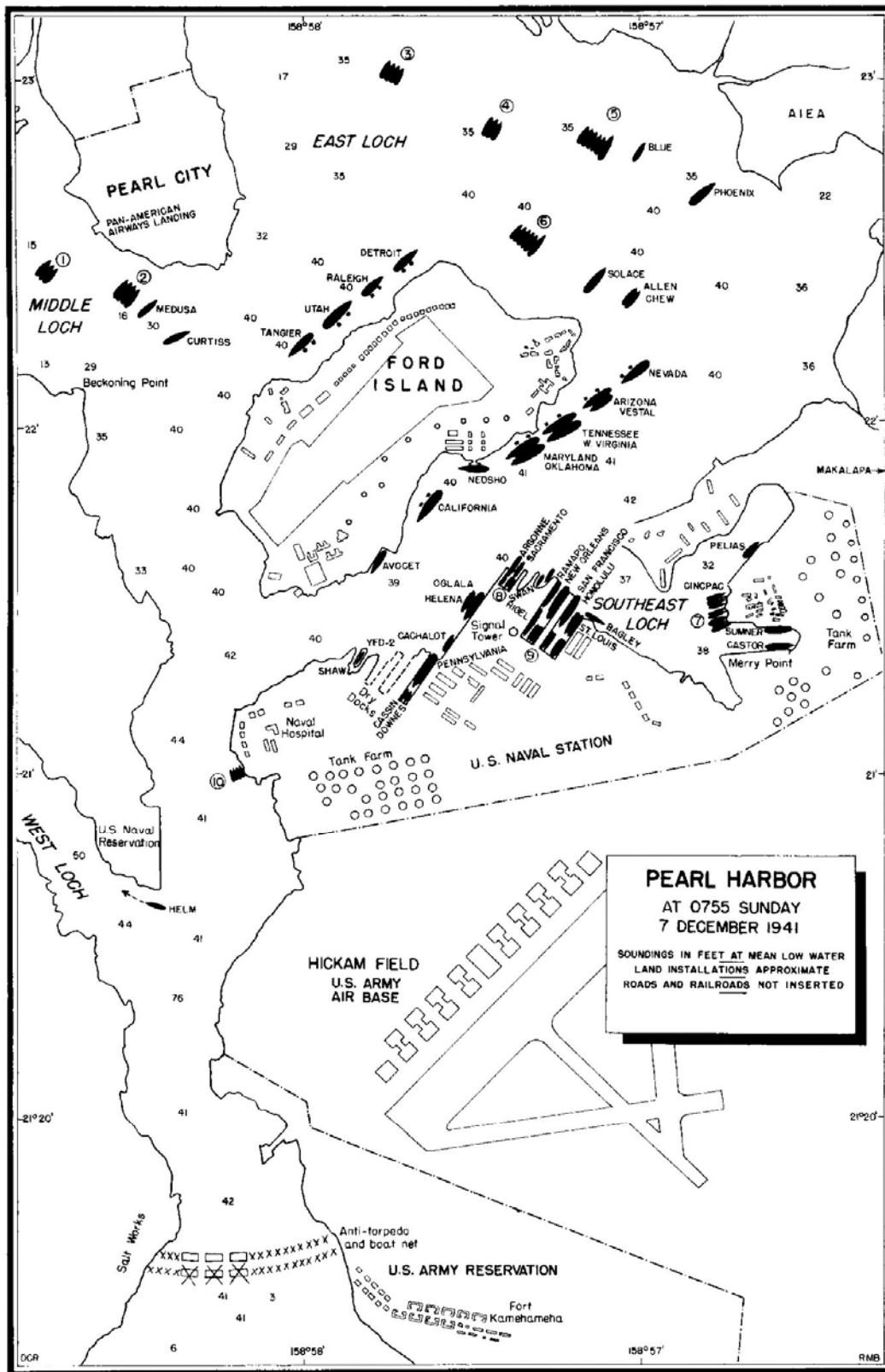
Direct Escort
CL Nagara
DD Inadzuma
DD Samidare

Ahead Sweeping Group (Hashimoto)
CL Sendai
DD Shikinami
DD Uranami
DD Ayanami

Notes:

The map positions indicate the first radar contact by US forces of the approaching IJN bombardment forces. The IJN player may arrange his forces as he sees fit, within the attacking formations. He may alter the ships in each of the formations but may not use any other ships, except those listed.

The IJN objective was to bombard the Henderson airfield complex and if possible destroy its operational capability. If the IJN player can bring the airfields into gunnery range they have won this particular battle in the campaign.



Key to chart of Pearl Harbor (Reading NW to SE in nests of ships): 1. Destroyer-minecraft *Ramsay, Gamble, Montgomery*; 2. Destroyer-minecraft *Trever, Breese, Zane, Perry, Wasmuth*; 3. Destroyers *Monaghan, Farragut, Dale, Aylwin*; 4. Destroyers *Henley, Patterson, Ralph Talbot*; 5. Destroyers *Selfridge, Case, Tucker, Reid, Conyngham*; tender *Whitney*; 6. Destroyers *Phelps, Macdonough, Worden, Dewey, Hull*; tender *Dobbin*; 7. Submarines *Narvhal, Dolphin, Tautog*; seaplane tenders *Thornton, Hulbert*; 8. Destroyers *Jarvis and Mugford* (inside *Argonne* and *Sacramento*); 9. Destroyer *Cummings*; destroyer-minelayers *Preble, Tracy, Pruitt, Sicard*; destroyer *Schley*; minesweeper *Grebe*; 10. Minesweepers *Bobolink, Vireo, Turkey, Rail, Tern*. Other auxiliaries, not shown, were moored up West Loch. There were also several tugs and yard craft, not shown, in the area of the chart.

Drawn by Robert M. Berish for *The Rising Sun in the Pacific*, courtesy of Naval Historical Center.