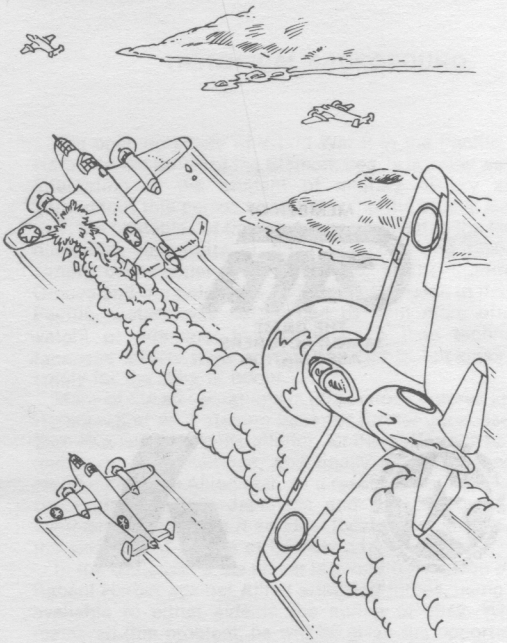
"WINGED SAMURAI"



MEMBER OF

THE GAME MANUFACTURERS ASSOCIATION

THE HOBBY INDUSTRY OF AMERICA PROMOTES ACHIEVEMENT

HISTORICAL BACKGROUND:

The opening phase of World War II in the Pacific, from Pearl Harbor to the Battle of the Bismark Sea, is in many ways the most interesting to the student of military history and tactics. Throughout this period, even following the crucial Battle of Midway, the obstacles of time and space prevented the technical and numerical superiority of Allied weapons and resources from simply overwhelming the Japanese. In the fighting for New Guinea and the Solomons and the carrier raids in the Southwest Pacific, victory was determined by skill more often than by weight of numbers; by tactics more than technology; and Japanese efforts were not yet reduced to hopeless resistance solely for the sake of honor.

Many of the air operations in this period centered about Rabaul Harbor—first as a staging base for further Japanese advances, then as a supporting installation for their efforts to halt the Allied march up the Solomons, and finally as a bypassed center of resistance in the Allied rear. As a result, Rabaul saw a wide variety of aircraft, both Japanese and Allied, locked in combat overhead. This makes it an ideal location for an investigation of the aircraft and tactics of this period.

In the basic game the player is given the mission of defending Rabaul Harbor against Allied attacking forces, using the aircraft available to either side in the spring of 1942. When he has mastered this problem, he will be given the opportunity to turn the clock ahead (by selecting more advanced Japanese fighter types) to a period where Allied air superiority was becoming more pronounced and the corresponding problems were more difficult.

This game accurately simulates the capabilities, organization,

and tactics of the contesting air forces during the period and provides the player with a chance to learn by experience some of the lessons of history.

AIRCRAFT:

Japanese Fighters

The standard fighter of the Imperial Japanese Army Air Force, the *Ki-27 NATE*, was relatively obsolete by 1941. Inadequately armed with two 7.7mm (roughly .30 cal.) machineguns and lightly built, it was further hampered by its non-retractable undercarriage, which seriously limited its speed, both on the level and in a dive. Its lightness, however, made it highly manueverable and fast-climbing.

The new Japanese Army fighter in 1941, the *Ki-43 OSCAR*, was a much more modern aircraft than its predecessor; it had a retractable landing gear and a more potent armament of two 12.7mm (.50 cal.) machineguns. In addition to sturdier construction and a higher top speed, it featured special combat flaps which gave it a phenomenal maneuverability.

Probably the most famous aircraft of the Second World War, the *A6M2 ZERO* was quite a surprise when it first appeared. Developed as the Japanese Navy counterpart to the OSCAR, the ZERO was an even more impressive jump in the state of the art. Although it could not match the OSCAR in its manueverability or rate of climb (however, it was markedly superior to contemporary U.S. aircraft), it was significantly faster in level flight and had three times the firepower; carrying two 7.7mm machineguns and two 20mm cannon! While there was a fair chance of surviving a burst from other Japanese fighters, an American pilot who got into the sights of a ZERO was very likely dead.

As the war continued, other Japanese fighters soon made their appearance.

A radical departure from typical Japaneses fighter designs, the *Ki-44 TOJO* sacrificed maneuverability for speed and armament. The result was a chunky fighter with an American look and essentially American performance levels. It was armed with four 12.7mm machine guns.

Like the American P38 the *Ki-45 NICK* was a twin-engined aircraft intended for use as a long-range bomber escort—and like its American counter-part, it suffered from a lack of maneuverability which outweighed its heavy armament of one 20mm cannon and two 12.7mm machineguns.

Appearing in early 1943, the *Ki-61-Ia TONY* was another departure from normal Japanese design, with a liquid-cooled engine, pilot armor, self-sealing fuel tanks, and a relatively heavy armament of two 12.7mm and two 7.7mm machineguns. While not quite as sturdy or well armed as the TOJO, it was faster and more maneuverable.

Each of these successful fighter types was the basis for a series of improved models.

The *A6M2 ZERO* was followed, in mid 1942 by the very similar *A6M3 HAMP* which sacrificed a little of its extreme maneuverability in favor of somewhat greater speed, rate of climb, and sturdiness. This trend continued with the *A6M5 ZERO*, introduced in 1944, which also featured a much heavier armament of three 13mm machineguns and two 20mm cannon. These changes made the ZERO increasingly formidable and it soon became the most numerous of Japanese fighters.

Attempts to improve the OSCAR were less successful. The *Ki-43-II OSCAR*, which replaced the earlier Ki-43-Ic model in July of 1943, was faster than its predecessor but less maneuverable and retained its twin 12.7mm machinegunes.

The improved *Ki-44-II TOJO* was also introduced in July of '43 and also showed no increase in armament over its previous model. However, the Ki-44-Ic had been adequately armed already and the new version retained all of its existing advantages while greatly improving its rate of climb.

The follow-on to the TONY, on the other hand, retained the performance of its predecessor while greatly increasing its armament. Introduced late in 1943, the Ki-61-Ic carried two 12.7 mm and two 20mm guns.

Two new fighter types appeared in 1944, barely in time to see service at Rabaul.

The *J2M3 JACK* was the Japanese Navy's equivalent to the Army's TOJO, a fighter which sacrificed maneuverability in favor of speed, rate of climb, and armament. Larger than the TOJO, the JACK was nearly as sturdy and (thanks to combat flaps similar to those used by the OSCAR) equally maneuverable, but carried the

formidable armament of four 20 mm cannon.

The most potent Japanese fighter, however, was the *Ki-84 FRANK*. Combining the maneuverability of the ZERO and the sturdiness of the TOJO, with an armament comparable to a late model TONY, the FRANK was faster than any of its predecessors and fully the equal of contemporary American fighters.

Allied Aircraft

Attacks against Rabaul could come from three sources—aircraft carriers, Allied bases in new Guinea and later, following the landing at Guadalcanal, a series of bases in the Solomon Islands at steadily decreasing ranges.

The *TBD-1 Devastator* carrier torpedo bomber had a brief—if spectacular—career at the beginning of the war. After gaining considerable reputation as a ship-killer at the Battle of the Coral Sea, the slow, under-armed Devastator became notorious for its vulnerability at the Battle of Midway and the survivors were quickly replaced.

The *TBF Avenger* which replaced the Devastator in mid 1942, was faster, sturdier and better-armed, with an added .30 caliber machinegun covering the previously vulnerable area under its tail. Later versions of the *TBF* were designated *TBM* but were virtually identical.

The *SBD-3 Dauntless*, carrier dive-bomber companion to the Devastator, enjoyed a much more successful career, serving throughout the war. This was not so much due to its greater speed, sturdiness and superior defensive armament (two .30 caliber and one .50 caliber machineguns) as to the disappointing performance of its intended replacement.

The *SB2C Helldiver* was designed to replace the Dauntless. Although it was faster, more heavily armed (with two .50 and two .30 caliber machineguns) and sturdier, the much larger Helldiver performed badly in trials and was too heavy for use by smaller carriers. As a result the *SBD-5* was introduced early in 1943 to extend the Dauntless' useful life. It sacrificed speed in return for a trivial increase in sturdiness, but remained in service even after the Helldiver finally entered service in November.

The *F4F-3 Wildcat* carrier fighter, with which the U.S. Navy entered the war, was sturdy and highly maneuverable by

American standards. It was, not a match for the ZERO, in spite of its heavy armament of four .50 caliber (12.7mm) machineguns. The newer *F4F-4* carried a still heavier armament of six .50s and in spite of seriously reduced maneuverability and speed, was more nearly a match for the Japanese fighter. Both of these aircraft suffered from poor rates of climb.

The *F4U-1 Corsair* was a much superior fighter which could have replaced the Wildcat late in 1942, combining the Wildcat's heavy armament and adequate maneuverability with a much higher speed and greater sturdiness. Serious doubts about the Corsair's ability to safely land on carrier decks, however, prevented its shipboard use until late in the war; but USMC squadrons began operating it from bases in the Solomons in February, 1943.

The direct successor to the Wildcat was the *F6F3 Hellcat*. Retaining the six .50 caliber machineguns of its predecessor, the Hellcat was much sturdier and faster, although less maneuverable. It also had a markedly superior rate of climb—thereby overcoming one of the most serious disadvantages of the other carrier fighters. U.S. Navy squadrons began operating the Hellcat in late 1943.

Of the land-based aircraft used against Rabaul the best known—if not the most common—was the American *B-17 Flying Fortress*. The *B-17C and D* in service at the beginning of the war were fast, sturdy and heavily armed by world standards—one .30 and six .50 caliber machineguns. Early in 1942, however, the *B-17E* appeared, with an additional pair of .50 caliber guns in the tail. Even this armament was deemed inadequate, for late in 1942, it was followed by the *B-17F* which added three more .50 caliber guns to the nose (replacing the almost trivial .30) and another .50 firing up and to the rear from the radio operators compartment!

While the Flying Fortress went on to subsequent models (with even heavier armament) in Europe, it was superceded in the Pacific by the longer-ranged *B-24 Liberator*. The first model of this bomber in combat was the LB30, an export version built for the British. Slower than the B-17C, it was equally sturdy but carried only five .50 caliber guns. In late 1942 the stopgap *LB30* was replaced by the slower, but better-armed, *B-24D* which added two .50 caliber guns to the nose armament, one on either side and a

similar gun to the belly, for a total of ten .50 caliber machineguns. The *B-24H*, which followed it late in 1943, had the same number of guns, but redistributed them to obtain better fields of fire below. It was also slightly sturdier and faster than the D-model. The B-24 was also operated by the RAAF and by the U.S. Navy under the designation *PB4Y*.

Much of the bombing effort against Rabaul was carried out by medium bombers. The first type in action was the *B-26A Marauder*. A fast aircraft and outstandingly sturdy, it was armed with two .30 caliber and two .50 caliber machineguns. This was soon increased by the addition of a .50 caliber ventral gun firing aft and the replacement of the single .30 caliber guns with one .50 in the nose and two in the tail. The resulting B-26B, which reached the Pacific in mid 1942, was nearly as well armed as the contemporary Fortress and Liberator heavy bomber and was significantly faster and sturdier. Later model B-26B's and the *B-26C*, appearing late in 1942, went even further, adding five fixed-foward-firing .50s and another ventral flexible .50 firing aft and down. This significantly reduced its speed—making it only equal to that of the heavies! Later versions of the B-26 deleted one of the fixed nose guns and slightly improved their top speed. Some were flown by the U.S. Navy as the *JM2*.

The *B-25B* was the first of the *B-25 Mitchell* series employed in the Pacific, arriving in New Guinea in April, 1942. While slightly slower and less sturdy than the Marauder, the Mitchell had a lower landing speed and was better suited to operations from rough jungle airstrips. This led to it gradually replacing the B-26 as the war continued. The armament of the *B-25B* (four .50 and one .30 caliber machineguns) was inferior to that of the contemporary *B-26B*, and the increased armament of the *B25C and D* (with two .50s replacing the .30 in the nose) was further behind that of the *B-26C*. However, with the arrival of the *B-25G* in the Southwest Pacific in July, 1943, there was little doubt as to which aircraft was more heavily armed—the new Mitchell carrying a 75mm cannon, in addition to its normal armament of six .50s! This was further augmented by field modifications, adding up to four fixed forward firing .50s. The *B-25H* which appeared in late 1943 regularized these modifications and also redisposed the other guns on the aircraft for an armament of one 75mm cannon, eight -fixed and six flexible or turreted .50 caliber

machineguns. The massive 75mm cannon, while ideal for certain targets interfered with conventional bombing missions and was useless as a defensive weapon. As a result, the *B25J*, which reached the SW Pacific in the spring of 1944, had a bombardier's position in the nose, rather than the 75 and carried six fixed and seven flexible .40s. Field modifications, however, replaced the bombardier position and its flexible nose gun, in most J-models, with six more .50's for ground strafing! The USMC operated the B-25 under the designation *PBJ*.

The tendency for U.S. medium bombers to be heavily—or even over—armed, with large numbers of fixed forward guns for strafing missions, extended to the smaller *A-20G Havoc*. Armed with six fixed and three flexible .50s, the Havoc reached the Pacific theater in early '43. Very fast and sturdy, the only serious shortcoming of the *A-20G* was its relatively weak rearward armament.

By contrast, the British *Beaufort* torpedo bomber, used by the RAAF, had the totally inadequate armament of four .303 inch machineguns. In spite of this handicap the *Beaufort* was extensively employed against Japanese shipping in and around Rabaul harbor.

The fighter derivative of the *Beaufort*—the *Beaufighter*—was a solidly built and massively armed aircraft, with four 20mm cannon and six .303 in. machineguns. In spite of its poor maneuverability and only adequate top speed, early in the war it was extremely valuable to the Allies, as the only fighter with sufficient range to reach Rabaul from their bases in New Guinea. Even this was possible only by replacing the six .303s with auxiliary fuel tanks.

In November of 1942, the *Beaufighter* was joined in the long-range escort role by the American *P38F Lightning*. Much faster than the Beaufighter and slightly sturdier, the Lightning suffered from a similar lack of maneuverability, a common problem with twin-engined designs. The armament of this—and all succeeding—P38 models was also lighter than that of the *Beaufighter*, though potent by Japanese standards: one 20mm cannon and four .50 caliber machineguns. The later *P38G and H* appearing in 1943 were essentially the same, although the H model suffered from an even less adequate rate of climb. The *P38J* introduced in 1944 overcame this last problem and also improved on the earlier model's already respectable speed.

As the fighting in the Solomons drew closer to Rabaul, two other U.S. fighters were able to participate in the fighting. By late 1943 the *P47D* was escorting U.S. bombers in the Pacific. Armed with eight .50 caliber machineguns, the Thunderbolt was a massive single-engined aircraft whose sturdiness and firepower more than made up for its lack of maneuverability. Although it was extremely fast, its modest rate of climb gave its Japanese opponents an ability to elude it.

While not as overwhelming an opponent as the Thunderbolt, the *P51D Mustang* was actually a more effective escort, for it had the high rate of climb lacking in other Allied fighters and was difficult for even the best Japanese fighters to avoid. Well-constructed and reasonably maneuverable, it carried six .50 caliber machineguns and was the fastest of all American fighters when it appeared in mid 1944.

Winged Samurai was produced by 4D Interactive Systems for Discovery Games. Game Developer: David A. Wesely. Programming: David Wesely and Stephen Goss. Artwork: Raymond Allard. Printing and Typesetting: Galley, Inc. Recording: Tom Jones Studios. **Winged Samurai** is based on the miniature wargames rules **Bombers and Battleships** by David A. Wesely and Ross W. Maker.