Appendix 1. Aircraft

**Aichi D3A1 “Val”**

Navy Type 99 carrier bomber (divebomber)

1 x 1,070hp engine Speed: 242mph max; 184mph cruise  
Range: 915 miles Weight: 8,047lb max  
Crew: 2 (pilot, rear gunner)  
Armament: 2 x 7.7mm fixed forward firing Type 97 MGs; 1 x 7.7mm Type 92 MG in rear cockpit; 1 x 250 kg (550 lb) bomb under the fuselage; optional 2 x 60 kg bombs under each wing.

The Aichi D3A1 Val was the primary divebomber of the Imperial Japanese Navy at the start of WWII. Its fixed landing gear gave the Val a slightly dated appearance, but this was a calculated design choice which avoided the weight and complexity of a retractable undercarriage.

**Aichi E13A1 “Jake”**

Navy Type 0 reconnaissance floatplane

1 x 1,080hp engine Speed: 234mph max; 138mph cruise  
Range: 1,300 miles Weight: 8,025lb max loaded  
Crew: 3  
Armament: 1 x 7.7mm Type 92 MG in rear cockpit; up to 250 kg (551 lb) of bombs or depth charges.

Accompanying the carrier force to Darwin were the modern heavy cruisers Tone and Chikuma. Five floatplanes were carried by each of these ships: two smaller, short-ranged biplane types and three Aichi E13 Jakes which were used for long-range searches. In this way the cruiser-based floatplanes became an integral part of Japanese carrier operations.