APPENDIX A:
EQUIPMENT RECOGNITION

INFANTRY WEAPONS

9-mm Self-Loading Pistol Type 92 (QSZ-29)

Cartridge	9 x 19 mm (Chinese DAP-92)
Effective Range	50 m
Operation	Short recoil, semiautomatic fire
Feed Device	15-round box magazine
Weight	760 kg
Length	190 mm

NOTE: also available chambered for 5.8- x 21-mm cartridge.

7.62-mm Automatic Pistol Type 54

Cartridge	7.62 x 25.0 mm
Effective Range	50 m
Operation	Recoil, semiautomatic fire
Feed Device	8-round box magazine
Weight Unloaded	0.903 kg
Length	195.0 mm

NOTE: The Type 54 is a copy of the Russian TT-33/Tokarev

5.8-mm Rifle QBZ 95

Cartridge	5.8 x 42.0 mm
Effective Range	400 m
Cyclic Rate of Fire	600 to 650 rounds/minute
Method of Operation	Gas blowback, seletive fire
Feed Device	30-round box magazine
Weight Unloaded	3.25 kg
Length	746 mm

NOTE: The Type 97 rifle is the export version of the QBZ 95; it is chambered to fire 5.56 x 45-mm NATO rounds. QBZ 95B carbine is a shorter version.

7.62-mm Assault Rifle Type 56, Type 56-1

Cartridge	7.62 x 39 mm
Range	
Maximum	2,500 m
Effective	400 m
Rate of Fire	
Cyclic	600 rounds/minute
Single-Shot	40 to 60 rounds/minute
Operation	Gas blowback, selective fire (semiautomatic, automatic)
Feed Device	30-round box magazine
Weight Unloaded	3,851 kg
Length	1,021.0 mm Type 56-1 is 645 mm long with stock folded

NOTE: The Type 56 and 56-1 are Chinese variants of the AK-47/AKM.

7.62-mm Submachinegun Type 64

Cartridge	7.62 x 25 mm
Effective Range	135 m
Method of Operation	Gas blowback, selective fire
Cyclic Rate of Fire	1,315 rounds/minute
Feed Device	30-round box magazine
Weight Unloaded	3.4 kg
Length	843 mm stock extended, 635 mm stock folded

7.62-mm Light Machinegun Type 56

Caliber	7.62 x 39.0 mm
Effective Range	800 m
Maximum Range	2,500 m
Operation	Gas blowback, automatic fire
Cyclic Rate of Fire	650 to 750 rounds/minute
Feed Device	25- or 50-round nondisintegrating-link belt
Weight Unloaded	7.08 kg with empty belt container
Length	1,036 mm

NOTE: feed capacity is 100 rounds in linked belt sections in drum-style container.

7.62-mm General Purpose Machinegun Type 80

Caliber	7.62 x 54.0 mm
Effective Range	1,000 m
Operation	Gas blowback, automatic fire
Rate of Fire	Cyclic 650, practical 350 rounds/minute
Feed Device	100- or 200-round belt or 50-round drum
Weight Unloaded	12.6 kg (gun and tripod)
Length	1,192 mm

0.50-in Sniper Rifle Barrett Model 82A1

Cartridge	12.7 x 99.0 mm
Effective Range	1,500 m
Maximum Range	2,000 m
Method of Operation	Short recoil, semiautomatic
Feed Device	10-round box magazine
Weight Loaded	13.6 kg
Overall Length	1,448.0 mm

30-mm Automatic Grenade Launcher AGS-17

Cartridge	30 x 131.7-mm HE-Frag
Crew	2 to 3
Effective Range	1,200 m
Maximum Range	1,730 m
Rates of Fire	
Cyclic	400 rounds/minute
Automatic	58 to 87 rounds/minute
Single-Shot	45 rounds/minute
Lethal Radius	7 to 9 m
Method of Operation	Gas blowback, selective fire
Feed Device	29-round nondisintegrating-link belt fed from a drum magazine
Weight Unloaded	17.75 kg
Length Overall	840 mm

ARMOR

Tank Type 59, 59-1, 59-2, 59-3, 79-I, 79-II

Crew	4
Armament	
Main	105-mm rifled gun
Coaxial	7.62-mm machinegun
Turret	12.7-mm machinegun
Bow	7.62-mm machinegun
Range	440 km (600 km with external fuel)
Maximum Speed	60 km/h
Vertical Obstacle	0.8 m
Gradient/Side Slope	60/30 percent
Trench	2.7 m
Fording	1.4 m (5.5 m with preparation)
Combat Weight	37,500 kg
Overall Length x Width x Height	9.2 x 3.3 x 2.8 m
Fuel Capacity, Type	927 liters plus 400 liters in drums

NOTE: The Type 79-I and 79-II are the latest in the progression of improvements to the Type 59. The Type 59 had a 100 mm gun, 59-1 improved power train, 59-2 had a 105-mm gun, 59-3 has improved automotive features. The Type 79 incorporated a 105-mm gun, side skirts, and a copy of an Israeli image intensifier large optical head Type 79-I, described and shown above, is widely deployed among China's forces.

Modernized Tank ZTZ 59 D1

Crew	4
Armament	
Main	105-mm rifled gun
Coaxial	7.62-mm machinegun
Turret	12.7-mm machinegun
Bow	7.62-mm machinegun
Other	Gun-launched ATGMs
Range	440 km (600 km using external fuel)
Maximum Speed	60 km/h
Vertical Obstacle	0.8 m
Gradient/Side Slope	60/30 percent
Trench	2.7 m
Fording	1.4 m (5.5 with preparation)
Combat Weight	37,000 kg
Overall Length x Width x Height	9.2 x 3.3 x 2.8 m
Fuel Capacity, Type	927 liters plus 400 liters in drums

Tank ZTZ 88B (Export Type 80-II); ZTZ 88B Modernized

Crew	4
Armament	
Main	105-mm rifled gun
Coaxial	7.62-mm machinegun
Turret	12.7-mm machinegun
Range	430 km
Maximum Speed	55 to 60 km/h
Vertical Obstacle	1.4 m
Gradient/Side Slope	32/30 percent
Trench	2.7 m
Fording	1.4 m (5 m with snorkel)
Combat Weight	38,500 kg
Overall Length x Width x Height	9.3 x 3.4 x 2.3 m

Tank Type ZTZ 96 (88C)/(85IIAP/85IIM Export); ZTZ 96-1 (88D), ZTZ96A

Crew	3
Armament	
Main	125-mm smoothbore gun
Coaxial	7.62-mm machinegun
Turret	12.7-mm machinegun
Range	600 km
Maximum Speed	57 km/h
Vertical Obstacle	0.8 m
Gradient/Side Slope	60/40 percent
Trench	2.7 m
Fording	1.4 m (5 m for 600 m with snorkel)
Combat Weight	41,000 kg
Overall Length x Width x Height	10.3 x 3.4 x 2.3 m
Fuel Capacity	1,300 liters (1,700 liters with external drums)

Tank Type ZTZ 98/99A; ZTZ-99, Type 98G (WZ 123)

Crew	3
Armament	
Main	125-mm smoothbore gun
Coaxial	7.62-mm machinegun
Turret	12.7-mm machinegun
Other	Gun-launched ATGMs
Range	500 m
Maximum Speed	65 to 80 km/h
Vertical Obstacle	0.9 m
Gradient/Side Slope	60/32 percent
Trench	3.0 m
Fording	1.4 m (5.0 m for 600 m with preparation)
Combat Weight	Up to 54,000 kg, depending on variant
Overall Length x Width x Height	11 x 3.5 x 2.3 m

NOTE: ZTZ-99/Type 98G shown.

Light Tank Type ZTQ 62

Crew	4
Armament	
Main	85-mm rifled gun
Coaxial	7.62-mm machinegun
Turret	12.7-mm machinegun
Range	510 km
Maximum Speed	60 km/h
Vertical Obstacle	0.7 m
Gradient/Side Slope	60/30 percent
Trench	2.55 m
Fording	1.3 m (5 m with preparation)
Combat Weight	21,000 kg
Overall Length x Width x Height	7.9 x 2.9 x 2.8 m (gun forward)

Amphibious Light Tank Type ZTS 63

Crew	3
Armament	
Main	85-mm rifled gun
Coaxial	7.62-mm machinegun
Turret	12.7-mm machinegun
Range	370 km
Maximum Speed	64 km/h
Vertical Obstacle	0.87 m
Gradient/Side Slope	32/38 percent
Trench	2.9 m
Fording	Amphibious
Combat Weight	18,400 kg
Overall Length x Width x Height	8.44 x 3.20 x 3.12 m
Fuel Capacity, Type	liters of

Modernized Amphibious Light Tank Type ZTS 63A

Crew	3
Armament	
Main	85-mm rifled gun
Coaxial	7.62-mm machinegun
Turret	12.7-mm machinegun
Other	1K13 ATGMs carried on ZTS 63A1
Range	370 km
Maximum Speed	64 km/h
Vertical Obstacle	0.87 m
Gradient/Side Slope	38/32 percent
Trench	2.9 m
Fording	Amphibious
Combat Weight	22,000 kg
Overall Length x Width x Height	9.6 x 3.2 x 3.0 m

Armored Personnel Carrier Type 63-Series (WZ 531 C, D, E; YW 531/701/750/304/381)

Crew; Passengers	2; 13
Standard Weapon	12.7-mm machinegun
Range	800 km
Maximum Speed	66 km/h
Vertical Obstacle	0.6 m
Side Slope	25 percent
Fording	Amphibious
Combat Weight	12,600 kg
Overall Length x Width x Height	5.5 x 3.0 x 2.9 m
Fuel Capacity, Type	450 liters of diesel

NOTE: These models represent the evolution of the Type 63 (WZ531) APC. Variants include the YW 531 series with 12.7-mm machinegun, YW 304 with 82-mm mortar, YW 381 with 120-mm mortar, YW750 ambulance, YW 701 series C^2 vehicles.

Amphibious Armored Personnel Carrier Type 63C (WZ 531)

Crew; Passengers	2; 13
Standard Weapon	12.7-mm machinegun
Range	800 km (500 km on water)
Maximum Speed	61 km/h (6.0 km/h on water)
Vertical Obstacle	0.6 m
Side Slope	25 percent
Fording	Amphibious
Combat Weight	12,600 kg
Overall Length x Width x Height	7.5 x 3.0 x 2.9 m
Fuel Capacity, Type	450 liters of diesel

NOTE: This variant has been modified with flotation cells fore and aft and an outboard motor.

Amphibious Armored Personnel Carrier Type 77 (WZ 511)

Crew; Passengers	2; 16
Standard Weapon	12.7-mm machinegun
Range	370 km (70 km on water)
Maximum Speed	60 km/h (12 km/h on water)
Vertical Obstacle	0.87 m
Gradient/Side Slope	60/40 percent
Trench	2.9 m
Fording	Amphibious
Combat Weight	15,500 kg
Overall Length x Width x Height	7.4 x 3.2 x 2.2 m
Fuel Capacity, Type	416 liters of diesel plus 200 liters in auxiliary tanks

NOTE: Variants of this series include the Type 77-1 and Type 77-2, with 12.7-mm machinegun; HQ- 2, with HQ-2J SAM; Type 83 (WZ 211), with SILKWORM antiship missile; prototype WZ 211, with turreted 122-mm gun-howitzer.

Infantry Fighting Vehicle Type ZBD 86 (WZ 501)

Crew; Passengers	3; 8
Armament	
Main	73-mm smoothbore gun with autoloader (sustainable rate of fire 8 rounds/minute)
Coaxial	7.62-mm machinegun
Other	One launch rail for Red Arrow 73 ATGM
Range	510 km
Maximum Speed	65 km/h
Vertical Obstacle	0.8 m
Gradient/Side Slope	60/47 percent
Trench	2.0 m
Fording	Amphibious
Combat Weight	13,300 kg
Overall Length x Width x Height	6.7 x 2.9 x 2.2 m
Fuel Capacity, Type	460 liters of Diesel

NOTE: variants include WZ 501, which is China's copy of the BMP-1; WZ 501A, with 25-mm cannon; WZ 504, with four pop-up rail launchers for Red Arrow 73 ATGM; WZ 506 command vehicle; Type 86B Marine version, with floatation cells and outboard motor; and Type 86G, with 30-mm cannon.

Armored Personnel Carrier Type 89 (WZ 534)-ZSD 89I 12.7-mm, ZSD89II 25-mm

Crew; Passengers	2; 8
Standard Weapon	12.7-mm machinegun
Range	500 km
Maximum Speed	65 km/h
Vertical Obstacle	0.7 m
Gradient/Side Slope	60/25 percent
Trench	2.2 m
Fording	Amphibious
Combat Weight	14,500 kg
Overall Length x Width x Height	6.6 x 3.1 x 2.8 m

NOTE: The Type 89 also is used as a base vehicle for 25-mm cannon and turret; Red Arrow 8 ATGMs (shown above); 120-mm mortar; 122-mm howitzer; 130-mm multiple rocket launcher; command and control variant; amphibious refueler; ambulance; and others.

Armored Personnel Carrier Type 90, 91 (WZ 535)

Crew; Passengers	2; 13
Standard Weapon	12.7-mm machinegun
Range	500 km
Maximum Speed	67 km/h
Vertical Obstacle	0.7 m
Side Slope	40 percent
Fording	Amphibious
Combat Weight	14,500 kg
Overall Length x Width x Height	Type 90 6.7 x 3.1 x 2.4 m; Type 91 7.4 x 3.1 x 2.4 m

NOTE: The Type 90 has 5 road wheels on each side, the Type 91 has 6. Variants include Type 90 with 120-mm mortar, 82-mm mortar, 130-mm multiple rocket launcher, or Red Arrow HJ-8 ATGMs; and Type 91 with 23- or 25-mm cannon or 122-mm gun-howitzer.

Airborne Infantry Fighting Vehicle BMD-3

Crew; Passengers	2; 5
Armament	
Main	30-mm rifled automatic cannon
Turret	7.62-mm machinegun; 9M113 or 9M113M (AT-5 or -5M) Konkurs ATGM
Bow	5.45-mm machinegun (on the right side); 30-mm automatic grenade launcher (left side)
Range	500 km (80 km on water)
Maximum Speed	71 km/h (10 km/h on water)
Vertical Obstacle	0.8 m
Gradient/Side Slope	70/45 percent
Trench	1.5 m
Fording	Amphibious
Combat Weight	13,200 kg
Overall Length x Width x Height	6.4 x 3.1 x 2.6 m
Fuel Capacity, Type	450 liters of diesel

Amphibious Infantry Fighting Vehicle BMP-3

Crew; Passengers	3; 7
Armament	
Main	100-mm rifled gun and 30-mm automatic cannon
Coaxial	7.62-mm machinegun
Bow	2x 7.62-mm machinegun, one on each side
Other	AT-10 ATGMs (launched from 100-mm gun)
Maximum Speed	70 km/h (10 km/h on water)
Range	600 km (70 km on water)
Gradient/Side Slope	75/35 percent
Vertical Step	0.8 m
Trench	2.5 m
Fording	Amphibious
Combat Weight	18,700 kg
Length x Width x Height	6.7 x 3.3 x 2.5 m
Fuel Capacity	690 liters of diesel (multifuel capable)

Armored Personnel Carrier Type ZSL 90 (WZ 551), Type ZSL 92 (WMZ 551)

Crew; Passengers	2; 11
Armament	
Armored Personnel Carrier	12.7-mm machinegun
Infantry Combat Vehicle	25-mm cannon and 7.62-mm machinegun (shown above)
Infantry Combat Vehicle	73-mm gun, 7.62-mm machinegun, and a Red Arrow ATGM launcher
Antitank Variant	Four Red Arrow ATGM launch rails
Range	500 km
Maximum Speed	66 km/h
Vertical Obstacle	0.5 m
Gradient	30 percent
Trench	1.2 m
Fording	Amphibious
Combat Weight	APC 12,500 kg; ICV 14,200 kg
Overall Length x Width x Height	6.6 x 2.8 x 2.9 m (length and height vary with configuration)
Fuel Type	Diesel

NOTE: The Type 90 chassis also is used for 122-mm self-propelled howitzer and 120-mm self-propelled mortar.

ARTILLERY

315-mm (2 Rd) Rocket Launcher PMH90-315-2

Number of Tubes	2
Type of Round	HE-frag.
Range	40 to 100 km
Emplacement Time	15 minutes
Traverse Limits	45.0 degrees left or right
Maximum Speed	60 km/h
Road Range	500 km

300-mm Rocket Launcher Type A100

Tube Configuration	1 row of 4 tubes over 1 row of 6 tubes
Types of Rounds	ADHPM (DPICM, AT mines, possibly thermobaric)
Range	40 to 100 km
Rate of Fire	10 rounds in 35 seconds
Reload Time	20 minutes
Emplacement/Displacement Time	7/2 minutes
Road Range	650 km
Maximum Speed	km/h
Gradient	57 percent
Fording	1.1 m
Chassis Length x Travel Width	11.1 x 3.1 m
Platform	TA5450 8x8 cargo truck

NOTE: The Type A100 is equipped with GPS, low-altitude meteorological, and fire-control systems.

122-mm Multiple Rocket Launch System (with 40-round Reload) Type 85, Type 89

Crew	5
Tube Configuration	4 rows of 10 tubes with 40-round reload pack
Types of Rounds	HE-frag., HE steel ball, HE steel ball incendiary, ICM, DPICM, incendiary, mine-laying
Range	9,600 (6,000 for mine-laying rocket) to 40,000 m
Rate of Fire	40 rounds in 20 seconds
Emplacement/Displacement Time	Approximately 2 minutes
Traverse Limits	Left 102.0 degrees, right 66.0 degrees
Elevation Limits	0.0 to +55.0 degrees
Other Armament	12.7-mm machinegun (Type 89 only)
Maximum Speed	55 km/h
Road Range	450 km
Vertical Step	0.7 m
Gradient/Side Slope	31/25 degrees
Trench	2.6 m
Fording	1.3 m
Travel Weight	29,900 kg
Travel Length x Width x Height	7.2 x 3.1 x 3.2 m

NOTE: Type 85 shown above.

107-mm Towed Multiple Rocket Launcher System Type 63

Crew	2
Tube Configuration	12 rocket launch tubes (3 rows of 4)
Range, Indirect Fire	3,000 to 8,500 m
Rate of Fire	12 rounds in 7 to 9 seconds
Traverse Limits	15 degrees left and right
Elevation Limits	0 to +60 degrees
Reload Time	5 minutes
Emplacement/Displacement Time	3/2 minutes
Travel Weight	613 kg
Travel Length x Width x Height	2.60 x 1.40 x 1.19 m

NOTE: The Type 63 is NOT in LAF inventory, but may be in Hizballah hands.

122-mm Self-Propelled Howitzer Type 85, Type 89

Crew	6
Gun Caliber	121.92 mm x 38.0
Types of Rounds	HE-frag., DPICM, illumination, smoke
Range, Conventional Munition	>15,300 m
Burst Rate of Fire	6 to 8 rounds/minute
Traverse Limits	22.5 degrees left or right
Elevation Limits	–5.0 to +70.0 degrees
Maximum Speed	60l km/h (6.0 km/h on water)
Road Range	500 km km
Vertical Step	0.6 m
Gradient	53 percent
Trench	2.2 m
Fording	Amphibious
Travel Length x Width x Height	6.7 x 3.1 x 2.9 m

NOTE: Type 85 and Type 89 are based on the Soviet D-30. Type 85 is described above. Type 89 improvements include a different tracked chassis and turret gun mount (Type 85 has an open mount with canvas cover over the crew compartment).

152-mm Self-Propelled Gun-Howitzer Type 83

Crew	5
Types of Rounds	HE-frag., DPICM illumination, smoke
Range, Conventional	17,230 m
Traverse Limit	360 degrees
Elevation Limits	–5.0 to +65.0 degrees
Emplacement Time	1 minute
Other Armament	12.7-mm machinegun
Road Range	450 km
Maximum Speed	45 km/h
Vertical Step	0.7 m
Gradient/Side Slope	71 percent/30 degrees
Trench	2.7 m
Fording	1.3 m
Travel Weight	27,215 kg
Travel Length x Width x Height	7.0 x 3.1 x 3.5 m

155-mm Self-Propelled Gun-Howitzer PLZ45

Crew	5
Gun Caliber	155.0 mm x 45.0
Types of Rounds	HE-frag., illumination, smoke
Range, Conventional, Indirect Fire	5,400 to 30,000 m (50,000 m extended)
Rates of Fire	
Burst	4 to 5 rounds per minute
Sustained	2 rounds per minute
Traverse Limits	30.0 degrees left or right
Elevation Limits	–3.0 to +45.0 degrees
Maximum Speed	55 km/h
Road Range	450 km
Vertical Step	0.7 m
Gradient/Side Slope	58 percent/21.15 degrees
Trench	2.7 m
Fording	1.2 m
Travel Weight	32,000 kg
Travel Length x Width x Height	10.5 x 3.3 x 2.6 m

122-mm Towed Howitzer Type 54-1

Gun Caliber	121.92 mm x 23.0
Types of Rounds	HE-frag., smoke
Range	
Direct Fire	660 m
Indirect Fire	5,350 to 11,800 m (conventional)
Rates of Fire	
Burst	5 to 6 rounds per minute
Normal	3 rounds per minute
Sustained	2 rounds per minute
Traverse Total	49.0 degrees
Elevation Limits	–3.0 to 63.5 degrees
Emplacement/Displacement Time	2/1 minute
Travel Weight	2,500 kg
Travel Length	5.9 m

122-mm Towed Howitzer Type 83

Gun Caliber	121.92 mm
Types of Rounds	HE-frag., illumination, smoke
Range	Conventional 12 km, extended 15 km
Traverse Limits	25.0 degrees left or right
Elevation Limits	–5 to +65.0 degrees
Combat Weight	2,700 kg
Travel Length x Width x Height	6.8 x 2.1 x 1.5 m

122-mm Towed Howitzer D-30

Crew; Section Size	5; 6
Caliber	121.92 mm x 38.0
Types of Rounds	HE-frag., DPICM, illumination, smoke
Range	1,000 to 15,300 m (conventional), 18,000 m (extended)
Rate of Fire	
Burst	8 rounds per minute
Normal	6 rounds per minute
Sustained	4 rounds per minute
Traverse Limit, Total	360 degrees
Elevation Limits	–7.0 to +70 degrees
Emplacement/Displacement Time	1.5/3 minutes
Travel Weight	3,200 kg
Travel Length x Width x Height	5.40 x 1.95 x 1.66 m
Prime Mover	Heavy 6x6 truck

130-mm Towed Gun Type 59-1

Gun Caliber	130.0 mm x 52.0
Types of Rounds	HE-frag., HE-frag.-incendiary, DPICM, illumination, smoke
Range, Direct Fire	1,170 m
Range, Indirect Fire	7,800 to 27,150 m (38,000 m extended)
Rates of Fire	
Burst	8 to 10 rounds per minute
Normal	6 rounds per minute
Traverse Limits	Left 30.0 degrees, right 28.0 degrees
Elevation Limits	–2.5 to +45.0 degrees
Travel Weight	6,300 kg
Travel Length x Width x Height	10.8 x 2.4 x 2.8 m

152-mm Gun-Howitzer Type 66, 66-1

Crew	5
Caliber, Cannon	152.4 mm x 27.82
Types of Rounds	HE-frag., DPICM, illumination, incendiary
Range	
Direct Fire	800 m
Indirect Fire, Conventional	4,400 to 17,400 m (up to 20,000 m extended)
Rates of Fire	
Burst	6 to 8 rounds per minute
Normal	5 rounds per minute
Sustained	4 rounds per minute
Elevation Limits	–5 to +65 degrees
Traverse Limits	Left 32.0 degrees, right 26.0 degrees
Emplacement/Displacement Time	2.5 minutes
Travel Weight	5,720 kg
Travel Length x Width x Height	8.7 x 2.43 x 2.5 m

NOTE: Type 66-1 is an improved version of the Type 66. Both are copies of the Soviet D-20. Data above are for the Type 66-1.

76-mm Towed Field Gun Type 54

Crew; Section	5; 6
Ammunition	76.2- x 41.6-mm HE-frag.
Range	
Direct Fire	820 m
Indirect Fire	1,500 to 13,290 m (conventional)
Rates of Fire	
Burst	25 rounds per minute
Normal	15 rounds per minute
Sustained	8 rounds per minute
Traverse Limits	27 degrees left or right
Elevation Limits	–5 to +37 degrees
Emplacement/Displacement Time	1 minute
Travel Weight	1,116 kg
Travel Length x Width x Height	6.1 x 1.2 x 1.4 m

NOTE: The Type 54 is a licensed copy of the Soviet ZIS-3 (shown).

100-mm Manportable Mortar Type PP89

Crew	4
Ammunition	HE-frag., smoke, illumination
Range	6,400 m
Rates of Fire	
Burst	20 rounds per minute
Normal	15 rounds per minute
Traverse Limits	degrees
Elevation Limits	+45.0 to +80.0 degrees
Travel Weight	73 kg

120-mm Towed Mortar Type W86

Ammunition	HE-frag., HE-RA, smoke, illumination
Range	
Conventional	7,700 m
Extended	13,000 m
Normal Rate of Fire	20 rounds per minute
Traverse Limits	4.7 degrees left or right
Elevation Limits	+45.0 to +80.0 degrees
Travel Weight	291 kg
Travel Length x Width x Height	2.4 x 1.6 x 1.1 m

NOTE: The Type W86 probably is replacing the 120-mm mortar Type 55, which is heavier and has a shorter maximum range than the W86.

60-mm Manportable Mortar Type 63-1

Ammunition	60.75-mm HE-frag., smoke, illumination
Range	95 to 1,550 m
Burst Rate of Fire	30 to 35 rounds per minute
Weight Empty	12 kg

82-mm Manportable Mortar Type 67

Ammunition	HE-frag., incendiary, smoke, illumination, leaflet
Range	85 to 3,040 m
Burst Rate of Fire	25 rounds per minute
Traverse Limits	≤21 degrees left or right by shifting bipod
Elevation Limits	+45.0 to +85.0 degrees
Weight Empty	35 kg

NOTE: The Type 67 mortar can be broken down into three loads.

82-mm Towed Automatic Mortar Type W99

Crew; Section	4; 5
Ammunition	HE-frag.
Range, Indirect Fire	800 to 4,270 m (direct fire is possible)
Rates of Fire	
Burst	4 rounds in 1.5 seconds
Normal	120 rounds per minute
Sustained	300 rounds in 30 minutes
Operation	Blow-back, selective fire (single-shot, automatic burst)
Feed Device	4-round clip (muzzle-loading is possible)
Traverse Limits	30 degrees left or right
Elevation Limits	–1.0 to +85.0 degrees
Weight Empty	650 kg
Firing Mode Width x Height	3.1 x 1.2 m

NOTE: The Type W99 is a copy of the Soviet 82-mm automatic mortar 2B9.

ANTIARMOR

120-mm Self-propelled Antitank Gun PTZ 89

Crew	4
Armament	
Main Gun	120-mm high-pressure smoothbore cannon
Auxiliary	12.7-mm machinegun
Rate of Fire, Main Gun	4 rounds per minute
Cruise Range	450 km
Maximum Speed	42 km/h
Gradient/Side Slope	60/40 percent
Vertical Obstacle	0.7 m
Trench	2.5 m
Fording	1.3 m
Combat Weight	30,000 kg
Hull Length x Width x Height	6.4 x 3.2 x 1.5 m

Antitank Guided Missile System Red Arrow 8

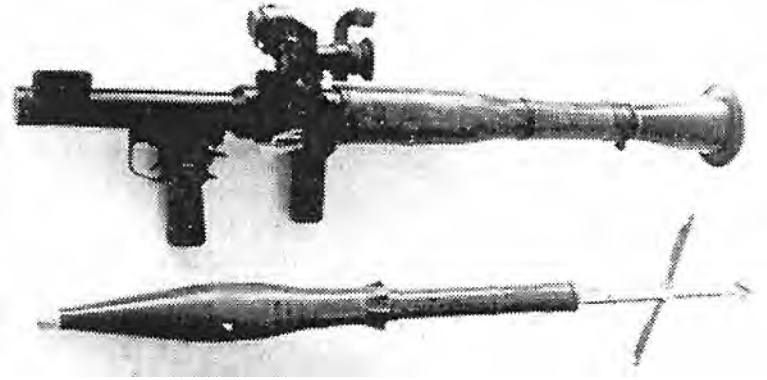
Warhead Diameter	120 mm
Types of Rounds	Unitary HEAT, Tandem HEAT,
Effective Range	100 to 4,000 m
Guidance	SACLOS, wire guided
Armor Penetration	800 to 900 mm RHA or greater
Combat Weight	
Launch Tube with Missile	24.5 kg in firing mode
Tripod	23 kg
Launch Tube Length x Diameter	1,566 x 255 mm

82-mm Recoilless Gun Type 65-1

Types of Rounds	HEAT or fragmentation
Effective Range	300 m
Maximum Range	1,750 m
Rate of Fire	rounds per minute
Armor Penetration	280 mm
Weight of Launcher	28 kg
Launcher Length x Bore	1.54 x 0.082 m

NOTE: The Type 65-1 is a modified copy of the Soviet B-10.

40-mm Grenade Launcher
Russian RPG-7, Chinese Type 69 and Type 69-1



Type	Shoulder-fired rocket-propelled-grenade launcher
Caliber	40-mm (launcher)
Grenade Types	HEAT, tandem, thermobaric, shaped-charge, HE-frag., and incendiary (grenades consist of warhead and two-stage rocket motor)
Minimum Range	20 m
Effective Range	
Stationary Target	500 m
Moving Target	330 m
Rate of Fire	4 to 6 rounds per minute
Armor Penetration	300 mm or greater (depending on grenade)
Weight	6.3 kg
Overall Length	1.1 m

NOTE: The Type 69 is a copy of the RPG-7 (shown above with optical sight), a notable difference being the addition of a bipod. The Type 69-1 is slightly shorter and lighter than the Type 69 and adds mechanical sight improvements and optional IR and electro-optical sights.

Rocket Propelled Grenade launcher Type 79

Type	Disposable shoulder-fired rocket-propelled-grenade launcher
Grenade Types	HEAT
Effective Range	50 m
Maximum Range	450 m
Launcher Weight	1.55 kg
Launcher Length x Bore Diameter	0.42 x 0.070 m

AIR DEFENSE

Low- to High-Altitude Surface-to-Air Missile System S-300P-series (SA-10c, -10d, -20 GRUMBLE)

Missile Type	5V559 (SA-10c, SA-N-6)	48N6 (SA-10d, SA-N-6)	48N6/2 (SA-20, SA-N-20)
Warhead	133-kg HE-frag.	143-kg HE-frag.	180-kg HE-frag.
Guidance	Inertial with updates and semi-active radar TVM		
Fuze	Proximity and contact		
Range	5 to 90 km	5 to 150 km	3 to 200 km
Target Altitude	25 to 25,000 m	10 to 27,000 m	10 to 27,000 m
Max. Target Speed	4,300 km/h	10,000 km/h	10,000 km/h
Rate of Fire	1 missile every 3 to 5 seconds		
Launch Weight	1,725 kg	1,800 kg	1,840 kg
Length x Diameter	7.25 x 0.514 m	7.5 x 0.515 m	7.5 x 0.515 m
Wingspan	1.13 m		
Transporter-Launcher	Land-based systems use the 5P85T trailer and Ural 375 truck, or 5P85S modified MAZ 543 or modified MAZ 7911 (modified SCUD B launcher) vehicle. Sea-based missiles usually are launched from 8-tube rotary launchers.		
NOTE: These systems have an antimissile capability. HQ-15 is China's designator for its version of the SA-10. China's designation for the naval version of these missiles is HHQ-9.			

Short- and Medium-Range Theater Air Defense Missile Systems
CF-2000, HQ-12 (export variant FT-2000)

Missile Type	CF-2000	HQ-12
Warhead	143-kg HE-blast-frag.	130-kg HE
Guidance	Inertial with GPS/GLONASS and active radar seeker	Inertial with broadband passive radar seeker TVM and home-on-jam capability
Fuze	Proximity	
Range	20 to 180 km	12 to 100 km, poss. greater
Target Altitude	Unknown	3 to 20 km
Launch Weight	2,100 kg	1,300 kg
Length x Diameter	7.2 x 0.52 m	6.8 x 0.47 m
Transporter-Launcher	TAS5380 or 5P85S (similar to that used for the SA-10)	

NOTE: Characteristics listed above are estimates.

Surface-to-Air Missile System HQ-2J (M-7) and HQ-2B

Type	2-stage low- to high-altitude SAM system
Range Limits	
HQ-2J	7 to 34 km (120 km in surface-to-surface role, CEP = 500 m)
HQ-2B	7 to 35 km
Effective Altitude Limits	
HQ-2J	500 to 27,000 m
HQ-2B	1,000 to 27,000 m
Maximum Target Speed	$\leq$ 3,600 km/h
Warhead	130-kg HE-blast-fragmentation
Fuze	Proximity or command
Guidance	Command
Reload Time	10 to 15 minutes
Missile Launch Weight	
HQ-2J	2,326 kg
HQ-2B	2,322 kg
Maximum Wingspan	2.5 m
Missile Length x Max. Diameter	10.84 x 0.65 m
Transporter-Launcher	
HQ-2J	Semi-fixed trainable single-rail launcher, traverse 360 degrees, elevation +11 to +65 degrees
HQ-2B	Mobile single-rail launcher (based on Type 63 tank chassis)

NOTE: The HQ-2 systems are improved versions of Russia's S-75 (SA-2 GUIDELINE). The HQ-7J can be used against ground targets. This requires a different control system and tank-chassis launcher.

Low- to High-Altitude Surface-to-Air Missile System
9K40 Buk-series/9K37 EZh (SA-17, SA-N-12 GRIZZLY)

Missile Designation	9M317 (SA-17)	9M38M2 (SA-N-12)
Range Limits	3.25 to 42 km	3.25 to 30 km
Effective Altitude	15 to 25,000 m	Up to 30,000 m
Maximum Target Speed	4,320 km/h	2,988 km/h
Warhead	50- to 70-kg HE-frag.	70-kg HE-frag.
Fuze	Proximity and contact	Proximity
Guidance	Inertial with command updates and SAR homing	
Missile Launch Weight	715 kg	710 kg
Maximum Wingspan	0.86 m	
Missile Length x Max. Diameter	5.55 x 0.4 m	5.55 x 0.4 m
Transporter-Launcher	Track- or semi-trailer-based self-propelled loader-launcher or track-based firing unit	Single-rail launcher with vertical rotary magazine with 24 missiles

NOTE: The SA-17 GRIZZLY is evolutionary replacement for the SA-11 GADFLY. It was designed to engage strategic and tactical aircraft, tactical ballistic missiles, cruise missiles, tactical air-launched missiles, and helicopters, including those hovering. The firing unit carries a radar system and is capable of autonomous operation. The launcher-loader carries spare missiles. The SA-N-12 is the naval version of the SA-17 and the evolutionary replacement for the SA-N-7 GADFLY.

Self-Propelled SAM System Tor-M1 (SA-15 GAUNTLET)

Type	Single-stage low- to medium-altitude surface-to-air missile system designed to engage aircraft, precision-guided weapons, and missiles
Crew	4
Effective Range	1,000 to 12,000 m
Effective Altitude Limits	10 to 10,000 m (10 to 7,000 m against missiles)
Maximum Target Speed	2,520 km/h
Warhead	15 kg HE-frag.
Fuze	Radar proximity
Guidance	Radio command
Reaction Time	5 to 8 seconds
Missile Preparation Time	5 seconds
Missile Launch Weight	165 kg
Missile Length x Diameter	2.9 x 0.23 m
Launcher	GM5955
Weight	34,000 kg
Length x Width x Height	7.5 x 3.3 x 5.1 m
Road Speed	65 km/h

Self-Propelled SAM System HQ-7, FM-80

Type	Shelter-mounted all-weather low- to very-low-altitude surface-to-air missile system
HQ-7 Battery Composition	
3x Firing Units	Trailer-mounted shelter; tracking radar system; TV tracking system; IR localizer; data processing and communication units; 4-tube missile launcher; towing vehicle; generator
1x Search Unit	Trailer-mounted shelter; search radar system; data processing and communication units; IFF system; radio station; towing vehicle; generator
Effective Engagement Range	500 to 12,000 m
Effective Altitude Limits	30 to 5,000 m
Target Detection Range	18.4 km
Target Tracking Range	17 km
Warhead	HE-frag.
Fuze	Proximity
Guidance	Radio command to line-of-sight guidance using radar or TV to track the target and IR to track the missile.
Reaction Time	6 seconds
Kill Probability	>80 percent (1 missile), >96 percent (2 missiles)
Missile Length x Diameter	3 x 0.2 m
Firing Unit Weight	11,000 kg
Firing Unit Shelter Dimensions	4.15 x 2.6 x 1.3 m (length x width x height)

Short-Range Surface-to-Air Missile PL-9-series

Type	PL-9, PL-9C ground- or air-launched; PL-9N ship-launched
Effective Range	
PL-9	Air-launched15 km; ground-launched 5.5 km
PL-9N	5 km
PL-9C	Air-launched 22 km
Warhead	10-kg HE-blast-frag. with 13-m kill radius
Fuze	Active laser proximity
Guidance	Infrared
Missile Launch Weight	115 kg
Wingspan	0.82 m
Missile Length x Diameter	2.9 x 0.157 m

25-mm Self-Propelled Gun-Missile Air Defense System PGZ 95

Crew	3
Armament	Quad 25-mm gun, 4x HN-5B surface-to-air missiles (SAM)
Ammunition	25.0- x 137-mm HEI, HEI-T, APHEI-T, APDS-T
Maximum Range, Gun/Missile	2,500/5,500 m
Maximum Altitude, Gun/Missile	6,400/3,300 m
Rate of Fire, Gun	600 to 800 rounds per minute per barrel
Traverse Limits; Rate	Unlimited; 120 degrees per second
Elevation Limits; Rate	–5 to +87 degrees; 100 degrees per second
Reaction Time	6 to 9 seconds
Maximum Speed	53 km/h
Cruise Range	450 km
Combat Weight	22,500 kg
Vehicle Length x Width x Height	6.7 x 3.2 x 4.8 m (radar antenna up)

57-mm Twin Self-Propelled Air-Defense Artillery System Type 80

Crew	6
Ammunition	57.0- x 348-mm HE-T, APC-t
Range	
Tactical	5,500 m
Maximum Vertical	8,800 m
Maximum Horizontal	12,000 m
Rate of Fire per Barrel	105 to 120 rounds per minute
Traverse Limits; Rate	Unlimited; 36 degrees per second
Elevation Limits; Rate	–5 to +85 degrees; 20 degrees per second
Maximum Speed	50 km/h
Combat Weight	31,000 kg
Platform	Type 69-II main battle tank chassis

NOTE: The Type 80 can fire on the move and from slopes up to 15 degrees.

37-mm Twin Self-Propelled ADA System Type 88

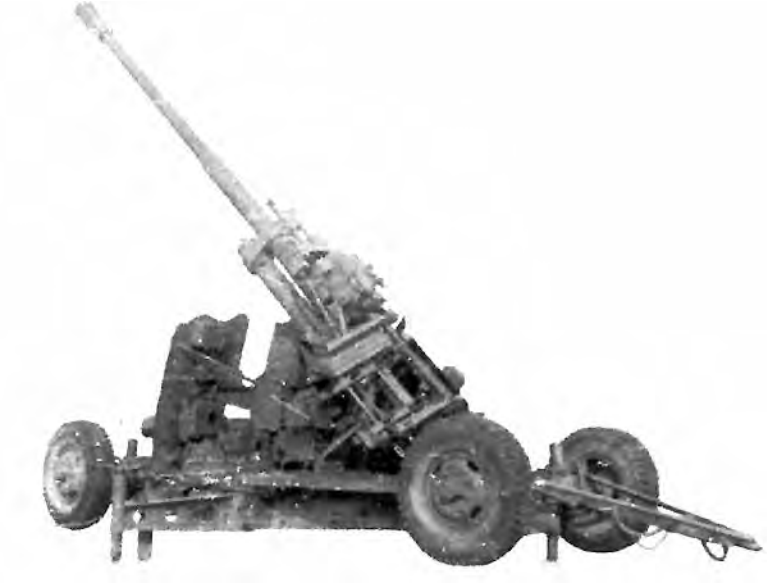
Crew	3
Ammunition	37.0- x 253R-mm HE, HE-T, AP-T
Ranges	
Tactical	4,000 m
Maximum Vertical	6,700 m
Maximum Horizontal	8,000 m
Rate of Fire per Barrel	180 to 190 rounds per minute
Traverse Limits; Rate	Unlimited; 60 degrees per second
Elevation Limits; Rate	–10 to +87 degrees; 50 degrees per second
Reaction Time	6 to 12 seconds
Maximum Travel Speed	50 km/h
Combat Weight	35,000 kg
Platform	Type 80 main battle tank chassis

NOTE: Type 88 is a follow-on version of the Type M1986. The Type M1986 is mounted on a Type-69 tank chassis. It has no radar or fire control system, and its maximum horizontal range is 8,500 m

100-mm Towed Air Defense Artillery Gun Type 59

Crew	7 to 10
Ammunition	100.0-mm frag., AP-T, APC-T, PFHE
Range	
Tactical	12,600 m
Maximum Vertical	14,500 m
Maximum Horizontal	21,000 m
Burst Rate of Fire	10 to 15 rounds per minute
Emplacement/Displacement Time	7/6 minutes
Traverse Limits; Rate	Unlimited; 20 degrees per second
Elevation Limits; Rate	–3 to +85 degrees; 12 degrees per second
Combat Weight	9,600 kg
Travel Length x Width x Height	m

85-mm Towed Air Defense Artillery Gun Type 72



Crew	7
Ammunition	85- x 630-mm frag., AP-T
Range	
Tactical Anti-aircraft	10,200 m
Maximum Vertical	10,200 m
Maximum Horizontal	15,500 m
Rate of Fire	15 to 20 rounds per minute
Reaction Time	10 to 30 seconds
Emplacement/Displacement Time	6 minutes
Traverse Limits, Total; Rate	720 degrees; 30 degrees per second
Elevation Limits; Rate	–3 to +82 degrees; 20 degrees per second
Combat Weight	4,300 kg

NOTE: The Type 72 may also be used in ground-support and antitank roles.

57-mm Towed Air Defense Artillery Gun S-60

Crew	8
Ammunition	57- x 348-mm FRAG-T, HE-T, APC-T, PFHE
Maximum Range	
Tactical	4,000 m (with optical sight, using off-carriage radar extends tactical AA range to 6,500 m)
Maximum Vertical	9,400 m
Maximum Horizontal	12,000 m
Rate of Fire	105 to 120 rounds per minute
Emplacement Time	1 minute
Displacement Time	3 minutes
Reload Time	4 to 8 seconds
Reaction Time	4 to 5 seconds
Traverse Limits; Rate Powered	Unlimited; 40 degrees per second
Elevation Limits; Rate Powered	–4 to +87 degrees/ 34 degrees per second
Combat Weight	4,763 kg
Length x Width x Height	8.84 x 2.08 x 2.37 m

NOTE: The Chinese Type 59 is a close copy of the Russian S-60; capabilities are slightly less.

37-mm Twin Air Defense Artillery Gun Type P793

Crew	5 to 6
Ammunition	37- x 253R-mm HE, HE-T, AP-T
Range	
Tactical Anti-aircraft	Up to 4,000 m
Maximum Vertical	6,700 m
Maximum Horizontal	8,500 m
Rate of Fire per Barrel	220 to 300 rounds per minute
Reload Time	4 to 12 seconds
Reaction Time	3 to 4 seconds
Emplacement/Displacement Time	60/70 seconds
Traverse Limits; Rate	Unlimited; 70 degrees per second
Elevation Limits; Rate	Powered 0 to +82.5 degrees, manual –5 to +87 degrees; 55 degrees per second
Combat Weight	3,100 kg

NOTE: Type P793 is an evolution of the Type 65. In contrast to the Type 65, the P793 has its own generator, hydraulic drive, and an electro-optical computing sight.

37-mm Towed Air Defense Artillery Gun Chinese Type 55

Crew	8
Caliber	37- X 253R-mm
Ammunition	FRAG-T, AP-T
Range	
Tactical Antiaircraft	2,500 m
Maximum Vertical	6,700 m
Maximum Horizontal	8,500 m
Rate of Fire	160 to 180 rounds per minute
Traverse Limits; Rate	Unlimited; 67 degrees per second
Elevation Limits; Rate	–5 to +85 degrees; 34 degrees per second
Weight	2,353 kg
Length x Width x Height	5.94 x 1.90 x 2.08 m
Platform	2-axle, 4-wheel, towed cruciform carriage

NOTE: The Type 55 is a direct copy of the Russian M1939.

35-mm Twin Air Defense Artillery Gun Type 90

Crew	3
Ammunition	35- x 228-mm HEI, HEI-T, TP-T
Range	
Tactical Anti-aircraft	4,000 m, depending on radar system used
Maximum Vertical	8,500 m
Maximum Horizontal	11,200 m
Rate of Fire per Barrel	550 rounds per minute
Feed Device	7-round clip packed in a 56-round reload container
Emplacement/Displacement Time	2 to 4/5 minutes
Traverse Limits; Rate	Unlimited; 120 degrees per second
Elevation Limits; Rate	–5 to +92 degrees; 60 degrees per second
Combat Weight	6,300 to 6,400 kg

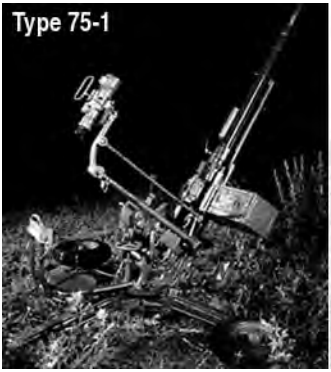
NOTE: Licensed Chinese-produced version of the GDF-005.

14.5-mm Quad Heavy Anti-aircraft Machinegun Type 56

Crew	5
Ammunition	14.5- x 114-mm API, API-T, HEI
Range	
Tactical Anti-aircraft	2,000 m
Maximum Vertical	4,600 m
Maximum Horizontal	6,350 m
Rate of Fire per Barrel	550 rounds per minute
Emplacement/Displacement Time	1.5 minutes
Reload Time	15 seconds
Reaction Time	8 seconds
Traverse Limits; Rate	360 degrees; 48 degrees per second
Elevation Limits; Rate	–9 to +90 degrees; 29 degrees per second
Weight without Ammunition	1,810 kg
Travel Length x Width x Height	4.5 x 1.9 x 2.3 m

NOTE: The Type 56 is a copy of the Russian ZPU-4.

14.5-mm Heavy Anti-aircraft Machinegun Type 75, 75-1, -80



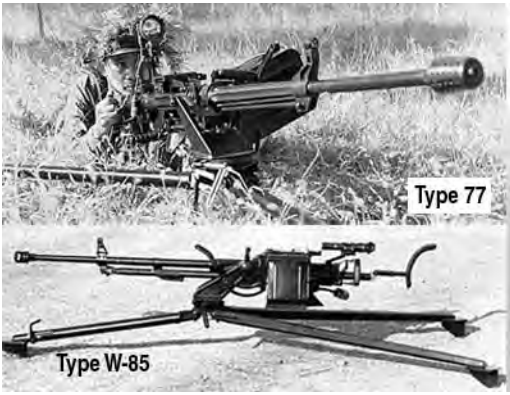
Ammunition	14.5- x 114-mm API, API-T, HEI
Tactical AA Range	2,000 m
Max. Vertical Range	4,600 m
Max. Horizontal Range	6,300 m
Rate of Fire per Barrel	550 rounds/min
Emplacement/Displacement Time	
Type 75, 75-1	15 to 20/20 to 25 seconds
Type 80	30 seconds
Reload Time	15 sec
Traverse Limits; Rate	360 degrees; 60 degrees per second
Elevation Limits; Rate	–15 to +85 degrees; 40 degrees per second
Weight	
Type 75	140 kg
Type 75-1	165 kg
Type 80	214 kg

NOTE: Type 80 is a copy of the Russian ZGU-1 mountain pack. Types 75 and 75-1 are light copies of the ZGU-1. Type 75 is the tripod-mounted version of the Type 75-1.

14.5-mm Twin Heavy Anti-aircraft Machinegun Type 58

Ammunition	14.5- x 114-mm API, API-T, HEI
Range	
Tactical Anti-aircraft	2,000 m
Maximum Vertical	4,600 m
Maximum Horizontal	6,300 m
Rate of Fire per Barrel	550 rounds/min
Emplacement/Displacement Time	20 sec
Reload Time	15 sec
Traverse Limits; Rate	360 degrees; 56 degrees per second
Elevation Limits; Rate	–15 to +90 degrees; 36 degrees per second
Weight	560 kg

12.7-mm Anti-aircraft Machinegun Type 54, 54-1; Type 77; Type W-85



	Type 54, 54-1	Type 77	Type W-85
Crew	4		
Ammunition	12.7- x 108-mm API, API-T, APDS		
Tactical AA Range	1,000 m	1,600 m	
Max. Vertical Range	5,300 m		
Max. Horizontal Range	8,000 m		
Rate of Fire, rounds/min	540 to 600	650 to 750	
Feed Device	50-round belt	60-round belt in magazine	
Reload Time	10 sec		
Reaction Time	2 sec		
Emplacement/ Displacement Time	1/3 min		
Traverse Limits, Total			
AA Position	360°	360°	
Ground Position		120°	
Elevation Limits			
AA Position	–10° to +85°	–15° to +80°	
Ground Position	–27° to +27°		–15° to +25°
Weight with Tripod	92 kg	56.1 kg	39 kg
Length	1.56 m	2.15 m	2.00

NOTE: The tripod can be set in a high (AA) or low (ground) position. May be vehicle-mounted. The Type 54-1 differs from the Type 54 only in that it has cooling fins on the barrel.

QW-1, -2, -3

Type	Two-stage low-altitude manportable air defense missile system
Warhead	HE chemical energy fragmentation
Guidance	IR homing seeker with proportional navigation and target-adaptive guidance
Deployment Time	10 seconds
Reaction Time	<5 seconds

	QW-1	QW-2	QW-3
Effective Range	500 to 5,000 m	500 to 6,000 m	800 to 6,000 m
Effective Altitude Limits	30 to 4,000 m	10 to 4,000 m	4 to 5,000 m
Launcher Weight with Missile	16.9 kg	18.4 kg	23 kg (missile)
Missile Length x Diameter	1.53 x 0.071 m	1.59 x 0.072 m	Length 2.1 m

NOTE: QW-3 naval variant has an HE-expanding-rod warhead and semi-active laser seeker, which increases the maximum range to 8,000 m.

HN-5A, -5B, -5C

Type	Single-stage low-altitude manportable air defense missile system
Effective Slant Range	800 to 4,400 m
Effective Altitude Limits	50 to 5,000 m (depending on target variables)
Maximum Target Speed	950 km/h
Warhead	HE
Guidance	IR homing seeker
Reaction Time	5 seconds
Launcher Weight with Missile	16 kg
Missile Length x Diameter	1.44 x 0.72 m

NOTE: The HN-5B is an improved version of the HN-5A. The HN-5C is designed for mounting on a vehicle.

AIRCRAFT

H-6A, H-6D, -6E, -6F, -6H, -6X, H-6 III, H-6U/HU-6

Type	Strategic bomber, maritime strike (H-6D), refuelling tanker (H-6U)
Crew	6
Armament	6x or 7x guns in nose, dorsal, ventral, and tail positions (none on H-6D); bombs in internal bay; cruise missiles; antiship missiles on H-6D
Maximum Cruise Speed	424 kn
Range	Up to 2,320 nmi
Endurance	5:41
Service Ceiling	12,000 m
Maximum Bomb Load	9,000 kg
Maximum Takeoff Weight	75,800 ktg
Weight Empty	38,530 kg
Length x Wingspan x Height	34.8 x 34.2 x 10.4 m

NOTE: The H-6 is China's licensed production version of the Soviet Tu-16 (BADGER).

H-5 (BEAGLE), HJ-5 (MASCOT), HZ-5

Type	Tactical light bomber, maritime strike aircraft, armed trainer (HJ-5), tactical reconnaissance aircraft (HZ-5)
Crew	3 or 2 (HJ-5)
Armament	2x fixed forward-firing 23-mm cannon; 2x turret-mounted 23-mm cannon in tail; various bombs, torpedoes, mines, or depth charges
Typical Criuse Speed	415 kn
Range	1,295 nmi (maritime strike 1,175 nmi)
Service Ceiling	12,500 m (maritime strike 12,300 m)
Maximum Internal Weapon Load	3,000 kg
Maximum Takeoff Weight	21,200 kg
Weight Empty, Equipped	12,890 kg
Length x Wingspan x Height	16.8 x 21.5 x 6.2 m

NOTE: The H-5 is based on the Soviet Il-28 (shown).

Su-30MKK, -30MKK2, (FLANKER G)

Type	Multirole fighter, naval strike fighter
Crew	2 tandem
Armament	1x 30-mm GSh-30-1 gun; 250- and 500-kg bombs; guided bombs; 80-, 120-, or 250-mm rocket packs; antiship missiles
Combat Range	1,620 nmi (internal fuel)
Maximum Level Speed	Approximately 1,345 kn
Service Ceiling	17,300 m
Maximum External Weapon Load	8,000 kg
Maximum Takeoff Weight	34,500 kg
Length x Wingspan x Height	21.9 x 14.7 x 6.4 m

NOTE: The Su-30 is based on the Su-27UB. Su-30MKK2 shown above.

Su-27SK (J-11), Su-27UB (FLANKER B, FLANKER C)

Type	
SK	Fighter
UB	Armed trainer
Crew	1 (2 tandem on Su-27UB)
Armament	1x 30-mm GSh-30-1 gun; 250- and 500-kg bombs; 80-, 120-, or 250-mm rocket packs;
Range with Maximum Fuel	2,370 nmi (2,807 nmi with in-flight refueling)
Maximum Level Speed	Approximately 1,345 kn
Service Ceiling	18,000 m
Maximum Weapon Load	Up to 8,000 kg
Maximum Takeoff Weight	33,000 kg
Length x Wingspan x Height	21.9 x 14.7 x 5.9 m

J-10

Type	Multirole fighter
Crew	1 (2 tandem in trainer)
Armament	1x 23-mm gun; probably various air-to-air and air-to-surface missiles, rockets, guided or free-fall bombs
Maximum Level Speed	Mach 1.85 at altitude
Ferry Range, Maximum Fuel	1,000 nmi
Service Ceiling	18,000 m
Maximum External Stores	4,500 kg
Maximum Takeoff Weight	18,500 kg
Weight Empty	9,750 kg
Length x Wingspan x Height	15.6 x 8.8 x 4.8 m

NOTE: The above characteristics are estimated.

J-8A, J-8 I, J-8B, J-8C/J-8 III, J-8D/J-8 IV, J-8F, JZ-8, JZ-8F (F-8 FINBACK)

Type	Multirole fighter, reconnaissance aircraft
Armament	1x twin 23-mm cannon; 7 external stations for a variety of air-to-air missiles and rockets, 90-mm air-to-surface rockets, bombs
Design Max. Level Speed	701 kn
Ferry Range	1,025 nmi
Service Ceiling	18,000 m
Maximum External Stores	4,500 kg
Maximum Takeoff Weight	18,879 kg
Weight Empty	9,820 kg
Length x Wingspan x Height	20.5 x 9.3 x 5.4 m (excluding nose probe)

J-7 I/J-7B/II, J-7C/III, J-7D/IIIA, J-7E J-7G, JJ-7, JH-7, JH-7A, JZ-7

Type	Fighter, reconnaissance aircraft
Crew	1
Armament	1x twin 23-mm cannon; 5 external stores stations for various missiles, rockets, bombs
Never-Exceed Speed	1,346 kn between 12,500 and 18,500 m
Range with Maximum Fuel	1,025 nmi
Service Ceiling	18,000 m
Normal Takeoff Weight	8,150 kg
Weight Empty	Approximately 5,300 kg
Length x Wingspan x Height	13.9 x 7.2 or 8.3 x 4.1 m

J-6 A, J-6 B, JJ-6, CJ-6, JZ-6

Type	Fighter, maritime strike, attack, and tactical reconnaissance aircraft
Crew	1
Armament	2x or 3x 30-mm guns; air-to-air rockets or missiles, bombs, torpedoes, antiship missiles
Maximum Level Speed	783 kn at 10,000 m
Range with Maximum Fuel	1,187 nmi
Endurance	2:38
Service Ceiling	17,900 m
Maximum Takeoff Weight	8,820 kg
Weight Empty	5,760 kg
Length x Wingspan x Height	13.4 x 9.0 x 3.9 m

NOTE: The J-6 is China's version of the Soviet MiG-19 (FARMER).

Q-5, Q-5I, Q-5IA, Q-5II, A-5M

Type	Attack fighter, naval strike
Crew	1
Armament	1x 23-mm gun; up to 10 attachment points for external stores such as air-to-air rockets or missiles, bombs, torpedoes, antiship missiles
Maximum Level Speed	643 kn at 11,000 m
Range with Maximum Fuel	982 nmi
Service Ceiling	15,850 m
Maximum Takeoff Weight	11,830 kg, with maximum external stores
Weight Empty	6,375 kg
Length x Wingspan x Height	15.7 x 9.7 x 4.3 m

NOTE: The Q-5 and A-5M are strike fighters are based on the J-6.

Il-76MD (CANDID B), Beriev A-50

Type	Transport, airborne early warning (A-50)
Crew; Passengers	7; 140 troops
Cruising Speed	405 to 420 kn
Range with Maximum Payload	2,051 nmi
Range with 20,000-kg Payload	3,940 nmi
Normal Cruise Altitude	9,000 to 12,000 m
Maximum Payload	47,000 kg
Maximum Takeoff Weight	190,000 kg (maximum permissible 210,000 kg for up to 15 percent of flights)
Operating Weight Empty	89,000 kg
Length x Wingspan x Height	46.6 x 50.5 x 14.76 m

NOTE: Specifications are for Il-76MD (shown above).

Tu-154M, Tu-154M/D (CARELESS)

Role	Transport, electronic or signals intelligence (Tu-154M/D)
Crew; Passengers	3; up to 180
Normal Cruising Speed	504 kn
Range, Maximum Fuel	3,563 nmi (12,015-kg payload)
Maximum Cruising Height	11,900 m
Maximum Payload	18,000 kg
Maximum Take-off Weight	100,000 kg
Weight Empty	55,300 kg
Length x Wingspan x Height	47.92 x 37.55 x 11.40 m

NOTE: Tu-154M/D shown above.

AN-26, -26B (CURL A) Short-Range Transport

Type	Twin-turboprop, short-range transport
Crew; Passengers	5**;** 38 to 40
Normal Cruising Speed	235 kn
Range with Maximum Fuel	593 to 1,380 nmi (depending on cargo loading)
Maximum Payload	5,500 kg
Armament	Provision for bomb rack on fuselage below each wingroot trailing edge
Cargo Handling	Powered mobile over-head winch (2,000-kg capacity); flush-mounted floor conveyor or rollgangs
Takeoff Run	870 m
Service Ceiling	7,500 m
Maximum Take-off Weight	24,000 kg
Length x Wingspan x Height	23.80 x 29.20 x 8.58 m

Y-8 Y-8F100/200, Y-8H, Y-8J, Y-8X, Y-8E, Y-8(DZ)

Role	Transport, freighter, communications, airborne warning and control system, airborne early warning (Y-8J), maritime patrol/surveillance (Y-8J, Y-8X), electronic intelligence (Y-8 [DZ]), signals intelligence, drone carrier (Y-8E), test bed
Crew; Passengers	3 or 5; up to 96
Armament	Possibly twin 23-mm guns in tail turret
Maximum Level Speed	357 kn
Range with Maximum Fuel	3,032 nmi
Takeoff Run	1,270 m
Maximum Payload	Up to 20,000 kg depending on configuration and cargo type
Service Ceiling	10,400 m
Maximum Take-off Weight	61,000 kg
Weight Empty, Equipped	34,500 kg
Length x Wingspan x Height	34.0 x 38.0 x 11.2 m

NOTE: The Y-8 is China's version of the Soviet An-12. Y-8(DZ) shown above.

An-24 (COKE), Y-7

Role	Short-range transport, communications
Crew; Passengers	3 or 5; 30 paratroops or 38 equipped troops
Normal Cruising Speed	243 kn
Range with Maximum Fuel	1,618 nmi (no reserves)
Takeoff Run	640 m
Service Ceiling	8,400 m
Maximum Payload	4,612 kg
Maximum Take-off Weight	21,000 kg
Weight Empty	14,060 kg
Length x Wingspan x Height	23.53 x 29.20 x 8.32 m

NOTE: The An-24 is designed to operate from airfields of limited size, with paved or natural runways. It can be fitted with rocket-assisted take-off units. The Y-7 is China's version of the An-24.

An-30 (CLANK) Special Mission

Role	Aerial survey, cloud seeding, or radiation detection, depending on variant
Crew	5
Maximum Level Speed	291 kn
Cruising Speed at 6,000 m	232 kn
Range with Maximum Fuel	1,420 nmi
Service Ceiling	Up to 8,300 m
Maximum Takeoff Weight	23,000 kg
Basic Operating Weight	15,590 kg
Length x Wingspan x Height	24.26 x 29.20 x 8.32 m

SH-5

Type	Maritime patrol aircraft, antisubmarine bomber, search and rescue flying boat
Crew	5 flight crew and 3 mission crew members
Armament	Dorsal turret with 2 guns; underwing hardpoints for antiship missiles, torpedoes; depth charges, mines, bombs, sonobuoys
Maximum Level Speed	300 kn
Minimum Patrol Speed	124 kn
Range with Maximum Fuel	2,565 nmi
Water Takeoff Run	482 m
Service Ceiling	10,250 m
Maximum Take-off Weight	45,000 kg
Weight Empty, Equipped	26,500 kg
Length x Wingspan x Height	38.9 x 36.0 x 9.8 m

JJ-5 (FT-5)

Type	Trainer
Crew	2 tandem
Armament	23-mm gun in removable belly pack
Normal Operating Speed	418 kn
Range with Maximum Fuel	664 nmi at 12,000 m
Service Ceiling	14,300 m
Maximum Takeoff Weight	6,215 kg
Weight Empty, Equipped	4,080 kg
Length x Wingspan x Height	11.3 x 9.6 x 3.8 m

NOTE: The JJ-5 is China's version of the MiG-17 (shown).

Mi-6A (HOOK)

Type	Heavy lift helicopter
Crew; Passengers	5; 65
Armament	12.7-mm machinegun in nose
Maximum Dash Speed	164 kn
Range (Placard)	335 nmi
Service Ceiling	4,500 m
Main Rotor	
Number of Blades	5
Diameter	35.0 m
Maximum Payload	12,000 kg
Maximum Takeoff Weight	42,500 kg
Basic Weight Empty	27,240 kg
Fuselage Length x Width x Height	33.2 x 3.2 x 6.7 m

SA 342L-Gazelle, Partizan, HI-45, HO-45, HN-45

Type	Light-lift, attack helicopter
Crew; Passengers	2; 3
Armament	20-mm gun, HOT ATGMs, 68-mm rockets
Maximum Speed	167 kn
Range	407 nmi at 128 kn
Endurance	4:12
Service Ceiling	4,300 m
Main Rotor	
Number of Blades	3
Diameter	10.5 m
Tail Rotor	
Number of Blades	13
Diameter	0.7 m
Basic Weight Empty	975 kg
Fuselage Length x Width x Height	9.5 x 2.0 x 3.2 m

AS 332L, AS 332L1 Super Puma; NAS-332L

Role	Transport
Crew; Maximum Passengers	2; 25
Range	480 nmi
Maximum Dash Speed	164 kn
Main Rotor	
Number of Blades	5
Diameter	15.6 m
Tail Rotor	
Number of Blades	5
Diameter	2.7 m
Maximum Payload	2,727 kg
Cargo Handling or Sling Load	4,500 kg
Maximum Design T-O Weight	9,350 kg
Basic Weight Empty	4,265 kg
Length x Width x Height	16.3 x 3.8 x 4.9 m

Z-11-Z-11, Z-11J, Z-11G, Z-11W, Z-11WA, Z-11MB1

Role	Light transport, attack
Crew; Passengers	2; 5
Armament	
Internal	Possible 7.62-mm machinegun or 20-mm cannon
External	Possible 20-mm cannon and 7.25-in rocket pack; 2x 2.75-in rocket packs; 2x to 4x air-to-surface missiles; twin 12.7-mm machinegun pods; or twin 57-mm rocket packs
Maximum Speed	155 kn
Main Rotor	
Number of Blades	3
Diameter	10.7 m
Tail Rotor	
Number of Blades	2
Diameter	1.9 m
Cargo Handling or Sling Load	500 kg
Maximum Design T-O Weight	2,200 kg
Basic Weight Empty	1,120 kg
Fuselage Length x Width x Height	10.9 x 2.5 x 3.1 m

Z-9, Z-9A, Z-9C, Z-9F, Z-9WA, WZ-9G

Role	Medium multipurpose, command and control, fire direction (Z-9A); antisubmarine warfare (Z-9C); day/night attack (Z-9WA, WZ-9G)
Crew; Passengers	2; 12 (Z-9WA/WZ-9G only crew of 2 to 4)
Armament	
Z-9A	Possibly 20- or 12.7-mm machinegun, 57- or 90-mm rockets
Z-9C	2x torpedoes or antiship missiles
Z-9WA, WZ-9G	8x ATGMs, up to 8x air-to-air missiles, possibly machineguns or cannon, rockets
Range, Standard Mission	464 nmi, using standard tanks (Z-9C 360 nmi)
Maximum Continuous Speed	Z-9A, Z-9WA/WZ-9G 151 kn; Z-9C 133 kn
Service Ceiling	Z-9A 6,000 m; Z-9C 4,220 m
Main Rotor	
Number of Blades	4
Diameter	11.94 m
Tail Rotor	
Number of Blades	11
Diameter	3.3 m
Maximum Payload	2,038 kg (Z-9WA/WZ-9G 2,162 kg)
Cargo Handling or Sling Load	1,600 kg
Maximum Design T-O Weight	4,100 kg
Basic Weight Empty	2,161 kg
Fuselage Length x Width x Height	11.4 x 2.0 x 4.5 m (Z-9WA 11.6 x 3.2 x 3.5 m)

NOTE: Characteristics are for Z-9A/Z-9F unless otherwise stated.

SA-321G Super Frelon, Z-8

Role	Transport, antisubmarine and antisurface warfare, minesweeping, minelaying, search and rescue
Crew; Passengers	2; 27
Armament	4x torpedoes, 2x antiship missiles
Maximum Speed	170 kn
Range, Standard Mission	440 nmi
Service Ceiling	3,100 m
Main Rotor	
Number of Blades	6
Diameter	18.9 m
Tail Rotor	
Number of Blades	5
Diameter	4.0 m
Cargo Handling or Sling Load	5,000 kg
Maximum Design T-O Weight	13,000 kg
Basic Weight Empty	6,836 kg
Fuselage Length x Width x Height	19.4 x 2.2 x 4.9 m

KA-27PS (HELIX D)

Role	Naval search and rescue
Crew; Passengers	4; 14
Maximum Dash Speed	146 kn
Range	670 nmi
Main Rotor	Coaxial
Number of Blades	6
Diameter	15.9 m
Maximum Payload	4,347 kg
Cargo Handling or Sling Load	4,174 kg
Maximum Design T-O Weight	12,600 kg
Basic Weight Empty	6,655 kg
Fuselage Length x Width x Height	11.3 x 4.0 (width less main rotor) x 5.4 m

NOTE: The KA-27PS is similar in appearance to the KA-28 (HELIX A), which is a basic antisubmarine warfare helicopter.

Mi-8P, -8T (HIP C)

Type	Twin-turbine transport helicopter
Crew; **Passengers**	3; 24
Armament	Possibly 57-mm rockets or 500-kg bombs
Range	260 nmi
Maximum Dash Speed	140 kn
Service Ceiling	4,800 m
Main Rotor	
Number of Blades	5
Diameter	21.3 m
Tail Rotor	
Number of Blades	3
Diameter	3.8 m
Payload	
Internal	4,000 kg
Sling Load	3,000 kg
Maximum Design Takeoff Weight	12,000 kg (rolling takeoff)
Weight Empty	6,824 kg
Fuselage Length x Width x Height	18.22 x 2.5 x 4.75 m

Mi-17MD, Mi-8MTV-5, Mi-172 (HIP L)

Type	Medium-lift assault helicopter
Crew; **Passengers**	3; 36 troops in full combat gear
Armament	Possible combination of 23-mm gun pods, rocket packs, ATGMs, bombs, air-to-air missiles
Features	Rear loading ramp, starboard cabin door.
Maximum Speed	137 kn
Range with maximum load	335 nmi
Endurance	4:00
Service Ceiling	6,000 m
Main Rotor	
Number of Blades	5
Diameter	21.3 m
Tail Rotor Number of Blades	3
Cargo Handling	
Internal	4,000 kg
Sling Load	5,000 kg
Maximum Design Takeoff Weight	13,000 kg
Fuselage Length x Width x Height	18.4 x 4.3 (width less main rotor) x 4.7 m

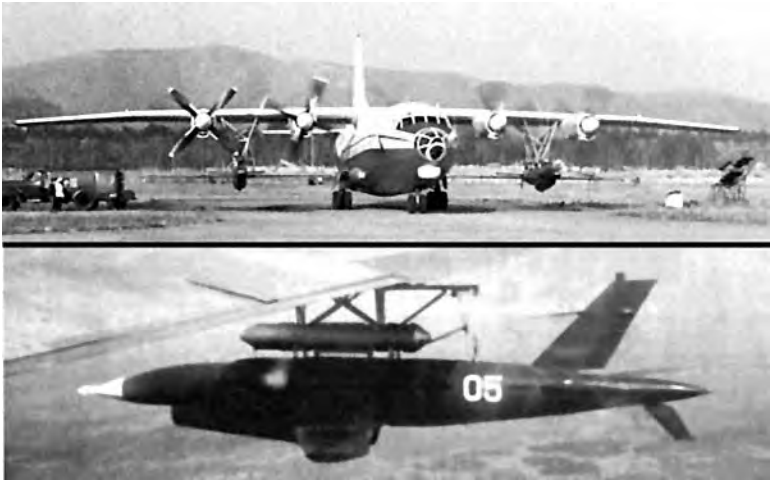
NOTE: Mi-172 (HIP L) is the civilian variant based on the Mi-17MD. Mi-8MTV-5 is an alternate designation for the Mi-17MD. Mi-17MD is shown above with open rear loading ramp and side cargo doors. Characteristics listed are for Mi-17MD.

Mi-4 (HOUND), Z-5

Type	Medium-lift helicopter
Crew; **Passengers**	2 or 3; 16
Armament	Possible 12.7-mm machinegun in belly turret
Features	Clamshell rear cargo door,
Maximum Dash Speed	115 kn
Ferry Range	405 nmi
Service Ceiling	5,500 m
Main Rotor	
Number of Blades	4
Diameter	21.0 m
Tail Rotor	
Number of Blades	3
Diameter	2.6 m
Maximum Payload	1,670 kg
Cargo Handling or Sling Load	1,300 kg
Maximum Design Takeoff Weight	7,800 kg
Basic Weight Empty	5,027 kg
Fuselage Length x Width x Height	16.8 x 2.0 x 4.0 m

NOTE: Z-5 is China's version of the Mi-4 (shown).

BUAA Chang Hong



Type	High-altitude air-launched multipurpose UAV
Maximum Level Speed	432 kn at 17,500 m
Range	1,350 nmi
Endurance	3:00
Operational Ceiling	17,500 m
Payload	65 kg of various survey or reconnaissance mission sensors
Maximum Launch Weight	1,700 kg
Length x Wingspan	9.0 x 9.8 m

NOTE: Shown above are Y-8E carrying two Chang Hong UAVs underwing (top) and Chang Hong UAV (below).

ASN-105, -105B

Role	Reconnaissance
Mission Equipment	Color video camera, 70-mm panoramic camera
Ground Support Equipment	Truck-mounted main command station and van-based mobile ground control station
Maximum Level Speed	108 kn
Mission Radius	54 nmi
Endurance	2:00
Service Ceiling	3,200 m
Maximum Payload	30.0 kg
Mission Design Takeoff Weight	140 kg
Wingspan	4.2
Fuselage Length x Width x Height	3.3 x 0.37 x 0.37 m

ASN-206

Role	Reconnaissance
Mission Equipment	Video camera or IR linescanner
Ground Support Equipment	6x truck-mounted shelters, each for command and control, launcher, power supply, information processing, maintenance, transportation
Maximum Speed	113 kn
Mission Radius	81 nmi
Endurance	8:00
Service Ceiling	6,000 m
Payload	50 kg
Takeoff Weight	220 kg
Wingspan	6.0 m
Fuselage Length x Height	3.8 x 1.4 m

SHIPS

XIA Class (Type 092) SSBN

Type	Strategic missile submarine
Displacement, Dived	6,500 metric tons
Dimensions	120 x 10 x 8 m
Complement	140
Speed, Dived	22 kn
Armament	
Missiles	12 CSS-N-3 ballistic missiles
Torpedoes	6x 533-mm bow tubes
Surface Search Radar System	SNOOP TRAY
Sonar System	
Active/Passive Search	TROUT CHEEK

HAN Class (Type 091) SSN

Role	Attack
Displacement	
Surfaced	4,500 metric tons
Dived	5,550 metric tons
Dimensions	98/106 x 10 x 7.4 m
Complement	75
Speed	
Surfaced	12 kn
Dived	25 kn
Armament	
Missiles	1x C-801 antiship missile
Torpedoes	6x 533-mm bow tubes
Mines	36, in lieu of torpedoes
Radar System	
Surface Search	SNOOP TRAY
Sonar Systems	
Active/Passive Search	TROUT CREEK
Passive Ranging and Intercept	DUUX-5

GOLF Class (Type 031) SSB

Type	Strategic missile submarine
Displacement	
Surfaced	2,350 metric tons
Dived	2,950 metric tons
Dimensions	97.5 x 8.6 x 6.6 m
Complement	86
Speed	
Surfaced	17 kn
Dived	13 kn
Range, Surfaced	6,000 nmi at 15 kn
Armament	
Missiles	1x CSS-NX-5 ballistic missile
Torpedoes	6x bow and 4x stern 533-mm tubes
Navigation Radar	SNOOP PLATE
Sonar System	
Active/Passive Search	PIKE JAW

YUAN Class (Type 041) SSK

Role	Patrol
Dimensions	72.0 x 8.4 m
Armament	
Missiles	Possible antiship missile
Torpedoes	6x 533-mm bow tubes

SONG Class (Type 039) SSK

Role	Patrol
Displacement	
Surfaced	1,700 metric tons
Dived	2,250 metric tons
Dimensions	74.9 x 7.5 x 5.3 m
Complement	60
Speed	
Surfaced	15 kn
Dived	22 kn
Armament	
Missiles	C-801 antiship missile
Torpedoes	6x 533-mm tubes
Mines	In lieu of torpedoes

KILO Class (Type 877, 636) SSK

Role	Patrol
Displacement	
Surfaced	2,325 metric tons
Dived	3,076 metric tons
Dimensions	72.6 x 9.9 x 6.6 m
Complement	52
Speed	
Surfaced	10 kn
Dived	17 kn
Armament	
Missiles	Antiship missile
Torpedoes	6x 533-mm tubes
Mines	24 in lieu of torpedoes
Radar System	
Surface Search	SNOOP TRAY
Sonar Systems	
Active/Passive Search	SHARK TEETH
Active Attack	MOUSE ROAR

NOTE: Type 636 is 1.2 meters longer. An SA-N-8 surface-to-air missile launcher may be fitted on the top fin.

MING Class (Type 035) SS

Role	Patrol
Displacement	
Surfaced	1,584 metric tons
Dived	2,113 metric tons
Dimensions	76 x 7.6 x 5.1 m
Complement	57
Speed	
Surfaced	15 kn
Dived	18 kn
Snorting	10 kn
Range	
Dived	330 nmi at 4 kn
Snorting	8,000 nmi at 8 kn
Armament	
Torpedoes	6x bow and 2x stern 533-mm tubes
Mines	32 in lieu of torpedoes
Radar System	
Surface Search	SNOOP TRAY
Sonar Systems	
Active/Passive Search/Attack	PIKE JAW
Passive Ranging and Intercept	DUUX 5

ROMEO Class (Type 033) SS

Role	Patrol
Displacement	
Surfaced	1,475 metric tons
Dived	1,830 metric tons
Dimensions	76.6 x 6.7 x 5.2 m
Complement	54
Speed	
Surfaced	15.2 kn
Dived	13 kn
Snorting	10 kn
Armament	
Torpedoes	6x bow and 2x stern 533-mm tubes
Mines	28 in lieu of torpedoes
Radar System	
Surface Search	SNOOP PLATE or SNOOP TRAY
Sonar Systems	
Active/Passive Search/Attack	Hercules or Tamir 5
Passive Ranging and Intercept	DUUX 5 in some

NOTE: One ROMEO Class has been modified (shown above) to carry 6 surface-to-surface missiles. The launch tubes are mounted horizontally on each side of the fin. The sub must surface and elevate the tubes to launch the missiles.

LUYANG I, II Class (TYPE 052B, 052C) DDG

Role	Anti-air, -surface, and -submarine warfare
Displacement, Full Load	7,000 metric tons
LOA x Max. Beam x Max. Draft	157 x 17 x 6.2 m
Complement	280
Speed	LUYANG I 29 kn; LUYANG II 30 kn
Range	
LUYANG I	4,500 nmi at 15 kn
LUYANG II	2,355 nmi at 30 kn, 4,945 nmi at 14 kn
Armament	
Guns	1x 100-mm x 56, 2x 7-barrel 30-mm x 75
Missiles LUYANG I	4x quad launchers for YJ-83, SA-N-12
Missiles LUYANG II	2x quad lauchers for YJ-62 (ASM), 8x sextuble HHQ-9 launchers (SAM)
Other	4x multiple rocket launchers
Aviation	Flight deck and hangar for Z-9 or Ka-28 helicopter
Equipment (LUYANG II)	2x 1-Mton and 2x 2.5-Mton cranes, 2x 6-m utility boats, 12x life raft canisters
Radar Systems	
Navigation	2x Kaige
Air Search	TOP PLATE (LUYANG I)
Surface Search, Target Acq.	SR-47B-G (LUYANG I); 2x LR-66 (LUYANG II)
Air/Surface Search	Type 364 Seagull C
Fire Control	4x FRONT DOME, Type 344, 2x Type 347G(2) RICE BOWL
IFF	Possibly 2x LONG BAR

NOTE: Characteristics apply to both classes unless otherwise specified.

SOVREMENNY I, II Class (Project 956E, 956EM) DDG

Role	Anti-air, -surface, and -submarine warfare; naval gunfire support; over-the-horizon targeting
Displacement, Full Load	7,940 metric tons
LOA x Beam x Draft	156 x 17.3 x 6.5 m
Complement	296
Speed	32 kn
Range	2,400 nmi at 32 kn, 4,000 nmi at 14 kn
Armament	
Guns	1x or 2x twin 130-mm x 70, 4x 6-barrel 30-mm x 65 (part of CADS-N-1)
Surface-to Surface Missiles	2x quad launchers for SS-N-22 SUNBURN
Surface-to-Air Missiles	2x launchers for SA-N-7, 2x 8-tube launchers for SA-N-11 (part of CADS-N-1)
Torpedoes	2x twin 533-mm tubes
Other	2x 6-barrel RBU 1000 mortars, mine rails
Aviation	Flight deck, pad, and telescoping hangar for Z-9C or Ka-28 helicopter
Equipment	13x life raft canisters (SOVREMENNY II)
Radar Systems	
Air Search	TOP PLATE
Surface Search	PALM FROND
Fire Control	FRONT DOME (SA-N-7), KITE SCREECH (130-mm guns), 2x BASS TILT (30-mm guns)
Sonar System	
Active Search and Attack	BULL HORN and WHALE TONGUE

LUHU (Type 052) Class DD

Role	Anti-air, -surface, and -submarine warfare
Displacement, Full Load	4,600 metric tons
LOA x Beam x Draft	144 x 16 x 5.1 m
Complement	266
Speed	28 kn
Range	1,300 nmi at 28 kn, 5,000 nmi at 14 kn
Armament	
Guns	1x twin 100-mm x 56, 4x twin 37-mm x 76A
Surface-to Surface Missiles	4x quad launchers for YJ-83
Surface-to-Air Missiles	1x 8-tube launcher for HQ-7 (Crotale)
Torpedoes	2x triple 324-mm tubes
Other	2x FQF 2500 12-tube mortars
Aviation	Flight deck and dual hangar for 2x Z-9 helicopters
Equipment	12x life raft canisters
Radar Systems	
Air Search	Type 518
Air/Surface Search	Type 363S Sea Tiger
Surface Search	Type 362
Fire Control	Type 344 (SSMs and 100-mm guns), 2x Type 347G(1) RICE BOWL (37-mm guns), Type 345 (SAMs)
Sonar System	
Active Search and Attack	DUBV-23
Active Attack	DUBV-43 VDS

LUDA I, II, III Class (Type 051, 051D, 051Z) DD

Role	Anti-air, -surface, and -submarine warfare
Displacement, Full Load	3,670 metric tons
LOA x Beam x Draft	132 x 12.8 x 4.6 m
Complement	280
Speed	32 kn
Range	2,970 nmi at 18 kn
Armament	
Guns	2x twin 130-mm x 58, 2x twin 57-mm x 70 or 4x twin 37-mm x 63, 4x twin 25-mm x 60
Surface-to Surface Missiles	2x triple launchers for HY-2
Surface-to-Air Missiles	
Torpedoes	2x triple-tube 324-mm in some
Depth Charges	2x or 4x BMB projectors, 2x or 4x racks
Other	2x FQF 2500 12-tube mortars, 38 mines
Aviation (*Jinan* only)	Flight deck and twin hangar for 2x Z-9 helicopters
Radar Systems	
Air Search	Type 515 BEAN STICKS, Type 381 RICE SHIELD
Navigation	FIN CURVE or Decca 1290
Surface Search	Type 354 EYE SHIELD, Type 352 SQUARE TIE
Fire Control	WASP HEAD or Type 343 SUN VISOR B, 2x Type 347G RICE BOWL
Sonar System	
Active Search and Attack	Pegas 2M and Tamir 2

NOTE: Equipment and electronics varies between ships.

LUHAI Class (Type 051B) DD

Role	Anti-air, -surface, and -submarine warfare
Displacement, Full Load	6,000 metric tons
LOA x Beam x Draft	154 x 16 x 6 m
Complement	250
Speed	29 kn
Range	4,500 at 14 kn
Armament	
Guns	1x twin 100-mm x 56, 4x twin 37-mm x 63
Surface-to Surface Missiles	4x quad launchers for YJ-83
Surface-to-Air Missiles	1x 8-tube launcher for HQ-7 (Crotale)
Torpedoes	2x triple 324-mm tubes
Aviation	Flight deck and dual hangar for 2x Z-9 or Ka-28 helicopters
Radar Systems	
Air Search	Type 517 KNIFE REST, Type 381C RICE SHIELD
Air/Surface Search	Type 360 Seagull S
Navigation	Decca 1290
Fire Control	Type 344 (SSM and 100-mm guns), 2x Type 347G(1) RICE BOWL (37-mm guns), Type 345 (HQ-7)
Sonar System	
Active Search and Attack	DUBV-23

LUZHOU Class (Type 051C) DDG

Displacement, Full Load	7,000 metric tons
LOA x Beam x Draft	155.0 x 17.0 x 6.0 m
Armament	
Guns	1x 100-mm x 56-01, 2x 7-barrel 30-mm x 75
Surface-to Surface Missiles	2x quad launchers for YJ-83
Surface-to-Air Missiles	6x 8-round launchers for SA-N-20
Aviation	Flight platform for Z-9 helicopter
Equipment	6.5-m utility craft, 12x life raft canisters
Radar Systems	
Air Search	TOP PLATE
Air/Surface Search	Type 364 Seagull C
Navigation/Surface Search	2x Kaige
Fire Control	Type 344 (SSMs and 100-mm gun), TOMB STONE

JIANGKAI I Class (Type 054) FF

Displacement, Full Load	3,900 metric tons
LOA x Beam x Draft	132.0 x 15.0 x 5.0 m
Complement	190
Speed	27 kn
Range	3,800 nmi at 18 kn
Armament	
Guns	1x 100-mm x 56-01, 1x 6-barrel 30-mm x 54
Surface-to Surface Missiles	2x quad launchers for YJ-83
Surface-to-Air Missiles	HHQ-7C
Torpedoes	2x triple 324-mm tubes
Aviation	Flight deck and hangar for Z-9 or Ka-28 helicopter
Radar Systems	
Air/Surface Search	Type 360 Seagull S
Surface Search	Type 364 Seagull C
Fire Control	Type 344 (SSM and 100-mm guns), Type 345 (HQ-7), Type 347G(1) RICE BOWL (30-mm guns)

NOTE: A follow-on to this class, JIANGKAI II Class, is under construction. The JIANGKAI II is expected to have increased air defense capabilities.

JIANGHU I, V Class (Type 053H) FF

Displacement, Full Load	Approximately 1,700 metric tons
LOA x Beam x Draft	103.2 x 10.8 x 3.1 m
Complement	200
Speed	26 kn
Range	2,700 at 18 kn, 4,000 at 15 kn
Armament	
Guns	2x 100-mm x 56 or 2x twin 100-mm x 56, 2x to 6x twin 37-mm x 63
Surface-to Surface Missiles	2x twin launchers for HY-2
Depth Charges	2x BMB-2 projectors (plus 2 racks in some)
Other	2x or 4x RBU 1200 5-tube mortars, up to 60 mines, possibly 122-mm MRLs in place of missile launchers (JIANGHU V)
Radar Systems	
Navigation	Don 2, FIN CURVE, or Racal Decca
Air Search	Type 517 KNIFE REST
Air/Surface Search	Type 354 EYE SHIELD
Surface Search/Fire Control	Type 352 SQUARE TIE
Fire Control	Type 347G RICE BOWL (in some), Type 343 WASP HEAD (in some)
Sonar System	
Active Search and Attack	Echo Type 5

NOTE: Equipment varies significantly between ships. JIANGHU V shown.

JIANGHU II (Type 053) Class FFT

Displacement, Full Load	1,865 metric tons
LOA x Beam x Draft	103.2 x 10.8 x 3.1 m
Complement	185
Speed	26 kn
Range	2,700 at 18 kn, 4,000 at 15 kn
Armament	
Guns	1x 100-mm x 55, 4x twin 37-mm x 63
Surface-to Surface Missiles	1x twin launchers for HY-2
Torpedoes	2x triple 324-mm tubes
Depth Charges	2x BMB-2 projectors (plus 2 racks in some)
Other	2x RBU 1200 5-tube mortars
Aviation	Flight deck and hangar for Z-9
Radar Systems	
Navigation	Don 2 or FIN CURVE
Air/Surface Search	Type 354 EYE SHIELD
Surface Search/Fire Control	Type 352 SQUARE TIE
Fire Control	HIGH POLE A, YARD RAKE or SQUARE HEAD
Sonar System	
Active Search and Attack	Echo Type 5

JIANGHU III, IV (Type 053 H2) FF

Displacement, Full Load	1,924 metric tons
LOA x Beam x Draft	103.2 x 10.8 x 3.1 m
Complement	200
Speed	26 kn
Range	2,700 at 18 kn, 4,000 at 15 kn
Armament	
Guns	2x twin 100-mm x 56, 2x twin 37-mm x 63-MOD
Surface-to Surface Missiles	4x twin launchers for YJ-1 or YJ-83
Depth Charges	2x BMB-2 projectors, 2 racks
Other	2x RBU 1200 5-tube mortars, up to 60 mines
Radar Systems	
Navigation	FIN CURVE
Air Search	Type 517 KNIFE REST
Air/Surface Search	Type 354 EYE SHIELD
Surface Search/Fire Control	Type 352 SQUARE TIE
Fire Control	Type 347G RICE BOWL, Type 343 WASP HEAD
IFF	HIGH POLE A
Sonar System	
Active Search and Attack	Echo Type 5

JIANGWEI II Class (Type 053 H3) FF

Displacement, Full Load	2,250 metric tons
LOA x Beam x Draft	111.7 x 12.4 x 4.8 m
Complement	170
Speed	27 kn
Range	4,000 nmi at 18 kn
Armament	
Guns	1x twin 100-mm x 56, 4x twin 37-mm x 63
Surface-to-Surface Missiles	4x twin launchers for YJ-1 or 2x quad launchers for YJ-83
Surface-to-Air Missiles	1x 8-tube launcher for HQ-7 (Crotale)
Torpedoes	
Other	2x RBU 1200 5-tube mortars
Aviation	Flight deck and hangar for 2x Z-9 helicopters
Equipment	2x 7.5-m utility boats, 10 self-inflating life rafts
Radar	
Air/Surface Search	Type 360 Seagull S
Air Search	Type 517 KNIFE REST
Fire Control	Type 343G (SSM and 100-mm gun), Type 345 (SAM), Type 347 G RICE BOWL
Navigation, Helicopter Guidance	Kaige
Sonar	
Active Search and Attack	Echo Type 5

HOUBEI Class PTG

Displacement, Full Load	220 metric tons
LOA x Beam x Draft	43.0 x 12.0 x 1.5 m
Complement	12
Speed	36 kn
Armament	
Guns	1x 6-barrel 30-mm x 65
Missiles	8x launchers for YJ-83
Radar	
Navigation	Unidentified I-band
Surface Search	Type 362

HOUJIAN (Type 037-2, HUANG) Class PTG

Role	Antisurface warfare
Displacement, Standard	520 metric tons
LOA x Beam x Draft	65.4 x 8.4 x 2.4 m
Complement	75
Speed	32 kn
Range	1,800 nmi at 18 kn
Armament	
Guns	1x twin 37-mm x 63, 2x twin 30-mm x 65
Missiles	2x triple launchers for YJ-1 or YJ-2
Equipment	1x 0.5-Mton crane, 1x 5-m speedboat, 2x life raft canisters
Radar	
Navigation/Surface Search	Decca-series
Surface Search	Type 348
Fire Control	Type 347G RICE BOWL

HOUXIN (Type 037-1G) Class PGG

Role	Antisurface warfare
Displacement, Full Load	478 metric tons
LOA x Beam x Draft	62.8 x 7.2 x 2.4 m
Complement	71
Speed	28 kn
Range	750 nmi at 18 kn
Armament	
Guns	2x twin 37-mm x 63, 2x twin 14.5-mm x 93
Missiles	2x twin launchers for YJ-1
Radar	
Navigation	Anritsu Type 723
Surface Search	SQUARE TIE
Fire Control	RICE LAMP

HUANGFEN Class (Type 021, Osa I) PTG

Displacement, Full Load	205 metric tons
LOA x Beam x Draft	38.6 x 7.6 x 2.7 m
Complement	28
Speed	35 kn
Range	800 nmi at 30 kn
Armament	
Guns	2x twin 25-mm x 60 or 2x twin 30-mm x 65
Missiles	2x twin launchers for HY-2
Radar	
Surface Search	SQUARE TIE
Fire Control	ROUND BALL or RICE LAMP
IFF	2x SQUARE HEAD, HIGH POLE A

HAINAN Class (Type 037) PC

Role	Antisubmarine warfare, coastal surveillance, and coastal defense
Displacement, Full Load	392 metric tons
LOA x Beam x Draft	58.8 x 7.2 x 2.2 m
Complement	78
Speed	30.5 kn
Range	1,300 nmi at 15 kn
Armament	
Guns	2x twin 57-mm x 70, 2x twin 25-mm x 60
Missiles	4x launchers for YJ-1 may be in place of aft 57-mm gun
Depth Charges	2x BMB-2 projectors, 2 racks
Other	4x RBU 1200 5-tube mortars, rails for 12 mines
Radar Systems	
Navigation/Surface Search	Decca-series or JRC
Surface Search	POT HEAD or SKIN HEAD
Sonar Systems	
Navigation	Echo sounder
Active Search and Attack	STAG EAR

HAIQING (Type 037-1) Class PC

Role	Antisubmarine warfare, coastal surveillance, coastal defense
Displacement, Full Load	478 metric tons
LOA x Max. Beam x Mean Draft	62 x 7.2 x 2.2 m
Complement	71
Speed	28 kn
Range	1,300 nmi at 15 kn
Armament	
Guns	2x twin 37-mm x 63, 2x twin 12.7-mm 79
Other	2x Type 87 6-tube mortars
Radar Systems	
Navigation/Surface Search	Decca-series
Surface Search	Anritsu RA 723
Sonar Systems	
Active Search and Attack	Thomson Sintra SS 12

HAIJIU Class PC

Displacement, Full Load	490 metric tons
LOA x Beam x Draft	64 x 7.2 x 2.2 m
Complement	72
Speed	28 kn
Range	750 nmi at 18 kn
Armament	
Guns	2x twin 57-mm x 70, 1x twin 30-mm x 65
Depth Charges	2 rails
Other	4x RBU 1200 5-tube mortars
Radar Systems	
Surface Search	POT HEAD
Fire Control	ROUND BALL
Sonar System	STAG EAR or Thomson Sintra SS 12

HAIZHUI Class (Type 062-1, SHANGHAI III) PC

Role	Antisubmarine warfare, coastal surveillance, coastal defense
Displacement, Full Load	170 metric tons
LOA x Beam x Draft	41 x 5.3 x 1.8 m
Complement	43
Speed	25 kn
Range	750 nmi at 17 kn
Armament	2x twin 37-mm x 63, 2x twin 14.5-mm or 2x twin 25-mm guns
Surface Search Radar System	POT HEAD or Anritsu 726
Active Search Sonar System	STAG EAR

HULUDAO Class (Type 206) WPB

Displacement, Full Load	180 metric tons
LOA x Beam x Draft	45 x 6.4 x 1.7 m
Complement	24
Speed	29 kn
Range	1,000 nmi at 15 kn
Guns	3x twin 14.5-mm machineguns

HAIGAO Class WPC

Displacement, Full Load	98 metric tons
LOA x Beam x Draft	31 x 4.7 x 1.4 m
Complement	15
Speed	32 kn
Guns	1x twin 14.5-mm x 93
Equipment	2-Mton hydraulic folding crane
Surface Search Radar System	Racal Decca ARPA

Type 611 Class WPC

Displacement, Normal	162 metric tons
LOA x Max. Beam x Max. Draft	43.8 x 6.5 x 1.6 m
Complement	24
Speed, Full Power	28.5 kn
Guns	Probably 1x twin 14.5-mm x 93
Equipment	1x 2-Mton hydraulic crane, 1x 7-m interceptor boat, 2x self-inflating life rafts
Radar Systems	
Navigation/Surface Search	2x Decca-series

HAIFENG (P 58E/A) Class WPC

Displacement, Full Load	435 metric tons
LOA x Beam x Draft	58 x 7.6 x 2.3 m
Complement	50
Speed	27 kn
Range	1,500 nmi at 12 kn
Guns	1x twin 14.5-mm x 93
Surface Search Radar System	Unidentified I-band

WOLEI Class MM

Displacement, Full Load	3,100 metric tons
LOA x Beam x Draft	93.8 x 14.4 x 4 m
Complement	180
Speed	18 kn
Range	7,000 nmi at 14 kn
Armament	
Guns	1x twin 57-mm x 50, 3x twin 37-mm x 63
Other	300 mines
Radar Systems	
Navigation/Surface Search	Decca-series

FUTI Class (Type 312) MSD

Type	Drone minesweepler
Displacement, Standard	47 metric tons
LOA x Beam x Draft	20.9 x 3.9 x 2.1 m
Complement	3
Speed	12 kn
Range	144 nmi at 12 kn
Equipment	Magnetic and acoustic sweeping gear

T-43 Class (Type 010) MSC

Displacement, Full Load	590 metric tons
LOA x Beam x Draft	60 x 8.8 x 2.3 m
Complement	70
Speed	14 kn
Range	3,000 nmi at 10 kn
Armament	
Guns	1x or 2x twin 37-mm x 63, 2x twin 14.5-mm x 93
Depth Charges	2x BMB-2 projectors, 20 depth charges
Other	12 to 16 mines
Equipment	MCMV, MPT-1 paravanes, MPT-3 mechanical sweep, acoustic and magnetic gear
Radar Systems	
Navigation/Surface Search	Furuno-series (some)
Surface Search	FIN CURVE or Type 756
IFF	HIGH POLE or YARD RAKE
Sonar Systems	
Active Search and Attack	Tamir II

WOSAO Class (Type 082) MSC

Displacement, Full Load	320 metric tons
LOA x Beam x Draft	44.8 x 6.8 x 2.3 m
Complement	40
Speed	25 kn
Range	500 nmi at 15 kn
Armament	
Guns	1x or 2x twin 25-mm x 80
Other	6 mines
Features	Steel hull with low magnetic properties
Navigation Radar System	Type 753
Sonar System	Hull-mounted active mine-hunting

YUTING I Class (Type 072 IV), YUTING II Class LST

Displacement, Full Load	4,800 metric tons
LOA x Beam x Draft	120 x 16 x 3.2 m
Complement	120
Speed	17 kn
Range	3,000 nmi at 14 kn
Guns	3x twin 37-mm x 63
Aviation	Platform for 2 medium helicopters
Equipment	2x LCVPs
Military Lift	250 troops, 10 tanks, 4 LCVPs
Radar Systems	
Navigation/Surface Search	Decca-series, Kaige, or Type 756
Navigation	2x Type 753

NOTE: YUTING II Class, a follow-on to the YUTING I (described above), is similar to but approximately 0.5 meter wider than the YUTING I.

YUKAN Class (Type 072) LST

Displacement, Full Load	4,170 metric tons
LOA x Beam x Draft	120 x 15.3 x 2.9 m
Complement	109
Speed	18 kn
Range	3,000 nmi at 14 kn
Guns	1x twin 57-mm x 50; 2x, 3x, or 4x twin 37-mm; 2x twin 25-mm x 60
Equipment	2x LCVP
Military Lift	200 troop, 10 tanks (total of 500 tons)
Navigation Radar Systems	2x Type 753

NOTE: Bow ramp maximum load 50 tons, stern ramp maximum load 20 tons.

YUDAO Class (Type 073) LSM

Displacement, Full Load	1,650 metric tons
LOA x Beam x Draft	77.4 x 10.4 x 3 m
Complement	60
Speed	18 kn
Range	1,000 nmi at 16 kn
Guns	2x twin 25-mm x 60
Navigation Radar System	FIN CURVE

YUDENG Class (Type 073) LSM

Displacement, Full Load	1,850 metric tons
LOA x Beam x Draft	87 x 13 x 3.8 m
Complement	35
Speed	17 kn
Range	1,000 nmi at 16.2 kn; 1,500 nmi at 14 kn
Guns	2x twin 25-mm x 80, 1x twin 37-mm x 63 MOD
Military Lift	500 troops; 9 tanks (250 tons)
Radar Systems	
Navigation/Surface Search	Decca-series

YUHAI (WUHU-A) Class (Type 074) LSM

Displacement, Full Load	799 metric tons
LOA x Max. Beam x Max. Draft	58.4 x 10.4 x 2.7 m
Complement	56
Speed, Full Power/Sustained	16/14 kn
Guns	2x twin 23-mm x 81; 2x twin 25-mm 80
Military Lift	250 troops; 2 tanks
Radar Systems	
Navigation/Surface Search	Decca-series; JRC

YULIANG Class (Type 079) LSM

Displacement, Full Load	1,100 metric tons
LOA x Beam x Draft	63 x 10 x 2.4 m
Complement	60
Speed	14 kn
Armament	
Guns	2x twin 25-mm x 60
Other	2x BM-21 multiple rocket launchers
Military Lift	3 tanks
Navigation Radar System	FIN CURVE

YUNSHU Class LSM

JAN 2004 UNCLASSIFIED

Displacement, Full Load	1,850 metric tons
LOA x Beam x Draft	87.0 x 12.6 x 2.25 m
Complement	70
Speed	17 kn
Range	1,500 nmi at 14 kn
Guns	1x twin 37-mm x 60 MOD
Military Lift	6 tanks or 12 trucks or 250 tons dry stores
Radar Systems	
Navigation/Surface Search	Decca-series

YUBEI Class LCU

LOA x Beam x Draft	65.0 x 11.0 x 2.7 m
Guns	2x twin 23-mm x 81
Equipment	Stern kedge anchor
Military Lift	150 troops; 10 tanks
Navigation Radar System	Decca-series

YUWEI Class (Type 271) WLCU

Displacement, Full Load	800 metric tons
LOA x Beam x Draft	56.5 x 10.4 x 2.3 m
Complement	25
Speed, Full Power	12 kn
Guns	4x 14.5-mm machineguns
Equipment	Stern kedge anchor
Military Lift	150 tons
Radar Systems	
Navigation/Surface Search	JRC

YUNNAN, YUNNAN II Class (Type 067) WLCM

Displacement, Full Load	138 metric tons
LOA x Max. Beam x Max. Draft	28 x 5.5 x 1.6 m
Complement	12
Speed	12 kn
Range	500 nmi at 10 kn
Guns	2x twin 14.5-mm x 93
Military Lift	46 tons
Navigation Radar System	Decca-series

YANHA Class AGB

Displacement, Full Load	3,200 metric tons
LOA x Beam x Draft	88.4 x 16.2 x 5.2 m
Complement	90
Speed	17.5 kn
Guns	4x twin 37-mm x 63, 4x twin 25-mm x 80
Navigation Radar System	FIN CURVE

NOTE: Possibly used for intelligence gathering.

YANBING Class (modified YANHA Class) AGI

Displacement, Full Load	4,420 metric tons
LOA x Max. Beam x Max. Draft	102 x 17 x 6.5 m
Complement	95
Speed	17 kn
Guns	4x twin 37-mm x 63
Radar Systems	
Navigation/Surface Search	2x Decca-series or FIN CURVE

NOTE: China claims that the YANBING can break ice up to 1.5 meter thick.

QIONGSHA Class AH, AP

Displacement, Full Load	2,150 metric tons
LOA x Beam x Draft	86 x 13.5 x 4 m
Complement	59
Speed	16
Guns	4x twin 14.5-mm x 93
Equipment	2x 1-ton cargo booms aft, 1x 1.5-ton cargo boom forward 4x 9-meter utility boats 12x liferaft canisters
Military Lift	400 troops; 350 metric tons cargo
Navigation Radar System	FIN CURVE

NOTE: The hospital ships are painted white; Red Cross markings are painted on the superstructure (see above).

DAZHOU Class AS

Type	Submarine tender
Displacement, Full Load	1,100 metric tons
LOA x Beam x Draft	79 x 9.5 x 2.6 m
Complement	130
Speed	18 kn
Guns	1x twin 37-mm x 63; 2x twin 14.5-mm x 93
Navigation Radar System	FIN CURVE

DALANG Class ARS

Type	Submarine rescue ship
Displacement, Full Load	4,200 metric tons
LOA x Beam x Draft	111.9 x 14.6 x 4.3 m
Complement	180
Speed	16 kn
Range	8,000 nmi at 14 kn
Guns	1x twin 25-mm x 80 or 1x twin 14.5-mm x 93
Navigation Radar System	FIN CURVE

DADIE Class AGI

Role	Reconnaissance, surveillance
Displacement, Full Load	2,300 metric tons
LOA x Max. Beam x Mean Draft	94.6 x 11.3 x 6.2 m
Complement	170
Speed	17 kn
Guns	4x twin 14.5-mm x 93
Equipment	8x encapsulated life rafts, 2x 7.5-meter utility boats, 2x davits, 3x 1.5-Mton articulating hydraulic cranes
Navigation Radar System	2x Type 753

XIANGYANG HONG 09 Class AG, AGI, WAGOR

Role	Coastal surveillance, reconnaissance, surveillance, research
Displacement, Full Load	4,435 metric tons
LOA x Max. Beam x Mean Draft	122 x 15.2 x 7.2 m
Complement	145
Speed	22 kn
Aviation	AG has a helicopter platform
Equipment	All have 4x 9-m lifeboats and 4x davits; some have 1x 4-Mton A-frame crane, 1x 4-Mton cab crane; AG and AGI have 1x 5-Mton boom
Military Lift (WAGOR)	
Diesel oil	1,096 metric tons
Fresh Water	413,000 liters
Radar Systems	
Navigation/Surface Search	2x Type 756

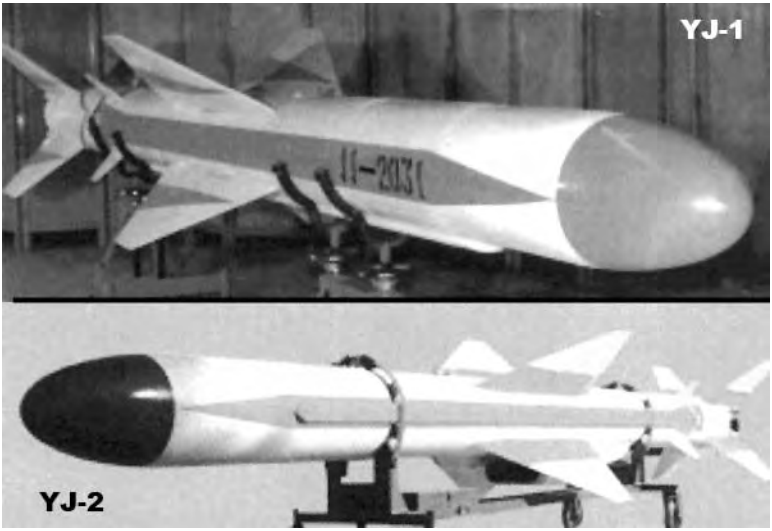
NOTE: Appearance and equipment vary slightly between ships. AG is painted white with red star on stack and orange cab crane. AGI is painted gray.

ANTISHIP/ANTISUBMARINE MISSILES

YJ-6, YJ-62

Nomenclature	YJ-6	YJ-62
Type	Antiship cruise missile	
Launch Platform	Aircraft	
Range	13 to 60 nmi	108 nmi
Payload	513-kg semi-armor-piercing blast-frag. warhead	300-kg semi-armor-piercing warhead
Fuze	Impact with delay	
Guidance	Inertial and active radar	
Launch Weight	2,440 kg	1,350 kg
Length x Diameter	7.36 x 0.76 m	7.1 x 0.54 m
Flight Profile		
Cruise Height	50, 70, or 100 m	30 m
Terminal Phase	Dives onto target	7 to 10 m
Remarks	For use against large ships	
NOTE: H-6D bomber shown above carrying two YJ-6 missiles under wings.		

YJ-1, YJ-2, YJ-82



Nomenclature	YJ-1	YJ-2	YJ-82
Type	Antiship missile		
Launch Platform	Ground/ship	Ground/ship	Aircraft
Range	4.5 to 23 nmi	8 to 65 nmi	8 to 65 nmi
Payload	165-kg semi-armor-piercing warhead		
Fuze	Impact with delay		
Guidance	Inertial and active radar		
Launch Weight	815 kg	715 kg	715 kg
Dimensions			
Wingspan	1.18 m		
Length x Diameter	5.81 x 0.36 m	6.39 x 0.36 m	5.3 x 0.36 m
Flight Profile			
Cruise Height	50 m		
Target Approach	20 to 30 m		
Terminal Phase	5 to 7 m		
Associated Search Radar Systems	SQUARE TIE, POT HEAD/SKIN HEAD, Type 363, Sea Tiger, ESR-1	SQUARE TIE, Type 363, Sea Tiger	

CY-1; YJ-7; YJ-3/YJ-83

CY-1 mockup


YJ-7

Nomenclature	CY-1	YJ-7	YJ-83
Role	Antisubmarine	Antiship	Antiship
Launch Platform	Ship	Ship, Aircraft	Aircraft, surface, submarine
Range	4.4 to 8.3 nmi (torpedo 3.5 nmi)	0.5 to 9.7 nmi	86 nmi (surface) or 135 nmi (aircraft)
Payload	Torpedo with 34-kg HE warhead	29-kg semi-armor-piercing warhead	165-kg semi-armor-piercing warhead
Fuze	Contact	Impact/Proximity	
Guidance	Inertial	Inertial and TV or active radar, poss. SAI or IIR	Inertial with command updates, active/passive radar
Launch Weight	700 kg	105 or 107 kg	715 kg (surface) or 555 kg (aircaft)
Wingspan	Not available	0.54 m	1.18 m
Length x Diameter	5.5 x 0.41 m	2.51 or x 0.18 m or 2.69 x 0.18 m	6.39 x 0.36 m or 5.3 x 0.36 m (aircraft)
Flight Profile			
Cruise Height		500 m	10 to 30 m
Terminal Phase	Underwater	Dives onto target	5 m
Associated Systems	Type 360, ESR-1		Type 343G
Remarks	Max. operating depth 300 m; max. target speed 30 kn	For use against small craft	Possibly supersonic

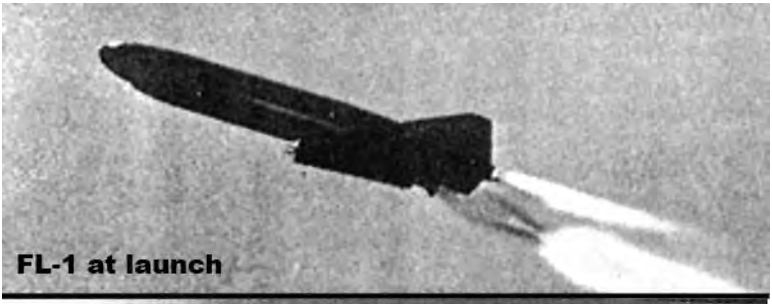
P-270, FF-1/JL-9 (SS-N-22 SUNBURN)

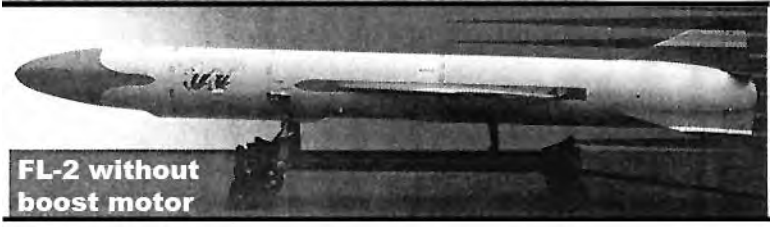
Type	Supersonic medium-range antiship missile
Launch Platform	Ship or ground
Range	5.4 to 54 nmi or greater
Payload	300-kg SAP warhead with 150 kg of HE
Guidance	Inertial with active, passive, or active-passive radar seeker capable of home-on-jam
Launch Weight	3,970 kg
Dimensions	
Wingspan	2.1 m
Length x Diameter	9.38 x 0.13 m
Flight Profile	
Cruise Height	20 m
Terminal Phase	7 m
Associated Search Radar Systems	BAND STAND

HY-2 (CSSC-3 SEERSUCKER)

Type	Short-range antiship missile
Launch Platform	Ship or ground
Range	10.8 to 51.3 nmi
Payload	513-kg HE warhead
Guidance	Autopilot with active conical-scan radar (HY-2 and HY-2G), active monopulse radar (HY-2B), or IR (HY-2A) seeker
Launch Weight	3,000 kg
Missile Length x Diameter	7.36 x 0.76 m
Flight Profile	
Cruise Height	100 to 300 m (30, 50, or 100 m for HY-2G variant)
Terminal Phase	8 m

FL-1 (CSS-N-1 SCRUBBRUSH MOD 2), FL-2 (CSS-NX-5 SABBOT), FL-7


FL-1 at launch


FL-2 without boost motor

FL-7 with boost motor

Nomenclature	FL-1	FL-2	FL-7
Type	Short-range antiship missile		
Launch Platform	Ship		
Range	45 km	50 km	30 km
Payload	513-kg HE warhead	365-kg HE warhead, possibly others	365-kg HE warhead
Guidance	Autopilot with active radar seeker		
Launch Weight	2,000 kg	1,550 kg	1,800 kg
Length x Diameter	6.42 x 0.76 m	6.0 x 0.54 m	6.6 x 0.54 m
Flight Profile			
Cruise Height	30 m	Probably 30 m	Probably 30 m
Terminal Phase	8 m	Probably 8 m	Probably 8 m
Remarks	Jettisonable boost motor; subsonic	Jettisonable boost motor; faster than FL-1	Jettisonable boost motor; supersonic

APPENDIX D: HOLIDAYS

Secular and Communist Holidays (Gregorian Calendar)

1 January	New Year's Day
5 February 2000 24 January 2001 12 February 2002	Chinese New Year (Spring Festival)
8 March	International Women's Day
1 May	International Labor Day
4 May	Youth Day
1 June	International Children's Day
1 July	Birthday of the Chinese Communist Party
1 August	PLA Birthday
1 October	National Day

Traditional Holidays

During the Cultural Revolution, much of China's culture and traditions came under attack from radicals known as the Red Guards. Traditional holidays, though celebrated in temples and other cultural institutions, are no longer prevalent in China.

The Gregorian Calendar

China follows the Gregorian calendar. Commonly used in various parts of the world, the Gregorian calendar is based on the solar year and has 365 days.

The Chinese Calendar

Unofficially, China also uses the Lunar Calendar that is based on the cycles of the moon. Lunar cycles last 29 to 30 days so a lunar year has only 354 days. In order to catch up with the length of a solar year, which has 365 days, an extra month has to be added every 3 years. In 1995, for example, there were two “Augusts.”

The Chinese New Year typically falls between late January and mid-February in the Gregorian calendar. Although many Chinese celebrate both new years, the Chinese New Year is the most important holiday of all. Although officially lasting only three days, many Chinese take a week off work to visit family and friends. Visitors should avoid traveling during this time as accommodations may be unavailable.

APPENDIX E: LANGUAGE

Numbers

	Mandarin		Mandarin
0	*ling*	12	*shi er*
1	*yi*	20	*er shi; (two tens)*
2	*er, liang*	21	*er shi; yi (two tens and a one)*
3	*san*	100	*yi bai*
4	*si*	200	*er bai*
5	*wu*	1,000	*yi qian*
6	*liu*	10,000	*yi wan*
7	*qi*	20,000	*liang wan*
8	*ba*	100,000	*shi wan; (ten ten thousands)*
9	*jiu*	200,000	*er shi wan*
10	*shi*	100,000,000	*yi yi*
11	*shi yi; (ten and one)*		

Pronouns

English	Mandarin	English	Mandarin
me	*woI or*	we	*wo men*
you	*ni*	plural you	*nimen*
he, she or it	*ta*	they	*tamen*

Post and Telecommunications

English	Mandarin	English	Mandarin
post office	*you ju*	telephone	*dian hua*
letter	*xin*	telephone card	*dian hua ka*

English	Mandarin	English	Mandarin
envelope	*xin fong*	fax	*chuan zhen*
postage stamp	*you piao*		

Transportation

English	Mandarin	English	Mandarin
airport	*fei ji chang*	bicycle	*zi xing che*
train station	*huo che zhan*	boat	*chuan*

Military Terms

English	Mandarin
army or military	*jun*
air force	*kong jun*
navy	*hai jun*
naval air force	*hai jun hang kong bing*
naval base	*hai jun ji di*
Marine Corps; the Marines	*hai jun lu zhan dui*
naval academy	*hai jun xue xiao*
seaport	*hai kou*
seaport/harbour	*hai gang*
coastal defense force	*hai fang bu dui*
coastal artillery	*hai an pao*
customs inspection	*hai guan jian cha*
army (ground forces)	*lu jun*
military headquarters	*jun bu*
military vehicle	*jun che*
armed forces; army; troops	*jun dui*
military expenditure	*jun fei*
military/army uniform	*jun fu*
military officer	*jun guan*
military/army emblem	*jun hui*

English	Mandarin
munitions	*jun huo*
arsenal	*jun huo ku*
military plan	*jun ji*
military strength	*jun li*
military provisions	*jun liang*
military orders	*jun ling*
military region; area command	*jun qu*
soldier; serviceman	*jun ren*
noncommissioned officer (NCO)	*jun shi*
military base	*jun shi ji di*
military academy	*jun shi xue yuan*
military academy	*jun xiao*
army group	*jun tuan*
military rank	*jun xian*
soldier's morale	*jun xin*

Key Phrases

English	Mandarin
Hello.	*nin hau.*
Good day.	*r-an.*
Good morning.	*zau-an.*
Good afternoon.	*wu-an.*
Good evening.	*wan-an.*
See you tomorrow.	*ming-tyan-jyan.*
Welcome.	*hwan-ying.*
Goodbye.	*dzai-jyan.*
See you later.	*hwei-tou-jyan.*
Yes.*	*dwei-le.*
No.*	*bu-dwei.*
Please.	*ching.*

English	Mandarin
Allow me.	*rang wo.*
Thanks.	*sye-sye.*
You are welcome.	*bu-sye.*
I am sorry.	*dwei-bu-chi*
You have been very kind.	*nin tai hau le.*
You have been a great help.	*cheng nin bang-mang.*
Come in.	*ching jin.*
Come here.	*lai jer.*
Come with me.	*gen wo lai.*
Come back later.	*deng yi-sya hwei-lai.*
Wait a minute.	*deng-yi-deng.*
Not yet.	*hai mei-you.*
Not now.	*bu-shr syan-dzai.*
Listen!	*ting!*
Look out!	*ju-yi!*
Be careful.	*syau-syin.*
I'm glad to meet you.	*wo hengau-sying de jyan dau nin.*
I do not understand.	*wo bu dung.*
I do not know.	*wo bu jr-dau.*
Write it down.	*ching sye sya lai.*
Go away!	*dzou-kai ba!*
Help!	*jyou-ming a!*
Police!	*jing-cha!*
Fire!	*hwo-shau!*
This is an emergency.	*jei shr yi-ge jin-ji shi-jyan.*
Stop here.	*ching ting dzai jer.*
Explain.	*jye-shr.*
I cannot hear you.	*wo ting-bu-jyan.*
How are you?	*nin hau ma?*
Won't you sit down?	*ching dzwo?*

English	Mandarin
What?	*shem-ma?*
What did you say?	*nin shwo shem-ma?*
What is that?	*nei shi shem-ma?*
What do you want?	*ni yau shem-ma?*
What is this?	*jei shi shem-ma?*
When?	*shem-ma shr-hou?*
Where?	*dzai nar?*
Why?	*wei shem-ma?*
How?	*dzem-ma-yang?*
How long?	*dwo jyou?*
English	*Mandarin*
How far?	*dwo ywan?*
How much?	*dwo-shau?*
How many?	*ji-ge?*
Who?	*shei?*
Who are you?	*nin shi shei?*
Who is...	*...shi shei?*
...that boy?	*nei-ge nan-hai-dz...*
...that girl?	*nei-ge nyu-hai-dz...*
...that man?	*nei-ge nan-ren...*
...that woman?	*nei-ge nyu-ren...*
What is your name?	*nin gwei-sying?*
What do you do for a living?	*nin dzwo shem-ma shi?*
Do you speak English?	*ni shwo ying-wen ma?*
Where is the U.S. Embassy?	*mei-gwo da-shr-gwan dzai nar?*
Where is the police station?	*jing-cha-jyu dzai nar?*
Do you understand me?	*ni dung bu-dung wo shwo de shr ma?*
Can you help me?	*ni ke bu ke-yi bang wo?*
What is wrong?	*ze me le?*

English	Mandarin
What street is this?	*jei-tyau jye jyau shem-ma?*
How far is it?	*you dwo ywan?*
Can we walk there?	*wo-men ke bu ke-yi dzou qui na li?*
Am I going in the right direction?	*wo dzou de fang-syang dwei bu-dwei?*
Is it on this side of the street?	*shi bu-shi dzai jye-dau de jei-byar?*
Is it on the other side of the street?	*shi bu-shi dzai jye-dau de nei-byar?*
Is it across the bridge?	*shi bu-shi dzai chyau dwei-mer?*
Is is straight ahead?	*shi bu-shi yi-jr syang chyan dzou?*
Is it inside the station?	*shi bu-shi dzai che-jan de li-tou?*
Is it near the square?	*shi bu-shi dzai gwang-chang de fu-jin?*
Is it at the entrance?	*shi bu-shi dzai da-men-kou?*
Is it up the hill?	*shi bu-shi dzai shan-shang?*
Is it down the stairs?	*shi bu-shi dzai lou-ti sya-myan?*
Is it around the traffic circle?	*shi bu-shi rau-je ywan hwan?*
At what time is supper served?	*shem-ma shr-hou chr wan-fan?*
How much do I owe you?	*wo yi-gung chyan nin dwo-shau chyan?*
May I use the telephone?	*jye-yung dyan-hwa yi-sya?*
May I leave a message?	*wo ke bu ke-yi lyou yi-ge dz-tyau?*
What time is it?	*shem-ma shr-hou le?*
How is the weather today?	*jin-tyan de tyan-chi dzem-ma-yang?*
What is the weather forecast?	*tyan-chi yu bau dzem-ma-yang?*

Common Signs and Public Notices

English	Mandarin
Admission	*ru-chang*
Admission free	*myan-fei ru-chang*
Attention	*ju-yi*
Beware of dog	*jin-fang gou yau*
Bus stop	*(gung-gung chi)-che-jan*
City hall	*shi-jeng-fu-li ting*
Clinic	*jen-lyau-swo*
Closed	*bu-kai-men*
Danger	*wei-syan*
Departure	*chi-cheng*
Down	*sya*
Emergency exit	*tai-ping men*
Enter	*jin ru*
Entrance	*ru kou*
Exit	*chu kou*
Forbidden	*jin-ji*
Hospital	*yi-ywan*
Keep off the grass	*wu ta tsau-di*
No noise	*ching wu chau-nau*
No smoking	*jin yan*
No spitting	*jin-jr tu-tan*
No swimming	*bu syu you-yung*
No trespassing	*bu syu shan-ru*
Pedestrians only	*sying ren jwan yung*
English	*Pronunciation*
Pull	*la*
Push	*twei*
Refuse	*la se*
Silence	*an-jing*

English	Mandarin
Toilet	*tse-swo*
Up	*shang*
Vacant	*kung de*
Warning	*jing-gau*
Watch your step	*syau-syin jyau-bu*
Wet paint	*you-chi wei-gan*
Zoo	*dung-wu-ywan*

APPENDIX I:
DANGEROUS PLANTS AND ANIMALS

Snakes

Siberian Pit Viper

Description:
Adult length usually 0.6 to 0.7 meter; maximum of 0.9 meter. Moderately stout snake. Background color pale gray, olive, or dark brown; dark cross-bands with light olive or pale yellow intervals between them. Belly moderately dark with indistinct spots and flecks of brown or gray. Dark postocular stripe with white line above. Head narrow, flattened on top; distinct from neck. Upturned snout.

Habitat:
Found in a variety of habitats from desert shrub to short grass or wooded steppes, coniferous forests, and mountainous areas up to elevations of 4,000 meters. Usually found in dry, rocky areas.

Activity and behavioral patterns:
Mainly nocturnal. During warmer months, emerges only after sunset. Reportedly can be highly aggressiveness.

Venom's Effects:
Primarily hemotoxic with some neurotoxic activity. Bite generally causes sharp pain at site, followed by edema and necrosis. May develop blood-filled blisters at site of bite. Heart rate and blood pressure usually increase. Recorded deaths usually result of respiratory failure.

Japanese Mamushi

No Photograph Available

Other names:

Asiatic Pit Viper

Description:

Adult length usually 0.4 to 0.5 meter; maximum of 0.7 meter. Background color pale gray, reddish brown, or yellow brown. Row of large circular markings on each flank comprised of dark oval blotches with darker margin, light inner area, and dark bulls-eye spot in center. Lower lateral sides whitish with series of dark spots; numerous dark flecks on belly. Dark postocular stripe extends to corner of mouth.

Habitat:

Varied; marshes, swamps, rocky hillsides, open woodland, montane rock outcroppings, and meadows.

Activity and behavioral patterns:

Generally diurnal, but active at twilight during hot weather. Usually docile, inoffensive, and sluggish.

Central Asian Pit Viper

Description:

Maximum length 0.8 meter; relatively stout. Background white, gray, brown red or olive; pale dorsal crossbands with dark edges which may be in two halves not meeting exactly at the vertebral line. Belly may be heavily or lightly speckled with gray. Dark cheek stripe, outlined above with light line extends from eye across the jaw.

Habitat:
Found in grasslands and scrub lands in mountainous areas.

Activity and behavioral patterns:
No information available.

Venom's effects:
Little information available. Likely hemotoxic and neurotoxic. Clinical symptoms may be similar to those of the Japanese Mamushi bite, which include pain and slight bleeding at site, swelling and rapid tender enlargement of local lymph nodes. Systemic symptoms may include double vision, neck rigidity, general achiness, difficulty breathing, and suppression of urine.

Rock Mamushi

No Photograph Available

Description:
Maximum length about 0.8 meter. Background color light gray to light brown; dark dorsolateral crossbands of various shades of brown, and ventrolateral series of small brown spots. belly light brownish or pinkish. Top of head with dark asymmetrical spots. Dark postocular strip bordered below with white.

Habitat:
Found on rocky slopes, along stream banks, and forest borders; mainly in mountainous areas.

Activity and behavioral patterns:
No information available.

Venom characteristics:
Hemotoxic and neurotoxic. Local symptoms may include edema, ecchymosis, blistering, and severe pain. Systemic symptoms may include blurred vision, ptosis, and ataxia.

Fea's Viper

Description:
Maximum length is 1 meter; a moderately slender snake. Background color is blue-black or black, patterned with thin red-orange lateral bands that sometimes meet middorsally. Belly is gray. Head is red-orange, patterned with two dark stripes, and is somewhat flattened and distinct from the neck.

Habitat:
Found in mountainous areas from 600 to 2,000 meters in elevation.

Activity and behavioral patterns:
Terrestrial.

Venom's effects:
Little information available. Likely hemotoxic. Few bites reported. Reported symptoms include local pain and swelling only

Usuri Mamushi

No Photograph Available
Description:
Maximum length less than 0.7 meter. Background color varies from pale to dark brown or reddish; row of large, dark bulls eye markings along both flanks. May have pale transverse stripe between bulls eye. Dark postocular stripe. Belly grayish. Head distinct from neck. Tip of tail dark.

Habitat:
Found in low mountains, hills, grassy areas near streams, open fields, forest edges, and marshes.

Activity and behavioral patterns:
Terrestrial. Generally sluggish and immobile during day. When confronted, vibrates tail rapidly and attempts to hide.

Venom's effects:
Hemotoxic and neurotoxic. Local symptoms may include edema, ecchymosis, blistering, and severe pain. Systemic symptoms may include blurred vision, ptosis, and ataxia.

Branded Krait

Description:
Adult length usually 1 meter to 1.2 meters; maximum of 2 meters. Background color is pattern of alternating light and dark bands encircling body. Light bands pale to bright canary yellow; dark bands generally black and wider. Distinctive black spear-shaped mark beginning between eyes and extending back along neck. Prominent dorsal ridge down back and tail gives thin, emaciated appearance. Tail blunt or slightly bulbous at tip.

Habitat:
Most commonly found in grassy fields, meadows, and cultivated areas, often adjacent to streams, rivers, and lakes. Found at elevations up to 1,550 meters.

Activity and behavioral patterns:
Normally nocturnal; may prowl during day during and after rains. Unaggressive and stealthy. Hides head beneath body if molested;

may twitch or writhe spasmodically but seldom attempts to bite even when aggravated.

Venom's effects:

Potent neurotoxin. Minimal local pain, redness, or edema. Systemic symptoms develop slowly; include general achiness, paralysis, shock, and respiratory failure. Fatalities recorded.

Chinese Banded Krait or Many-banded Krait

Description:

Adult length is 0.8 to 1.0 meter, with a maximum of 1.8 meters. Background color is black or blue-black, with 30 to 50 white transverse bands. Belly is white or off-white. Glossy appearance; lacks verebral ridge along middle of back. Tail is long, thin and tapering.

Habitat:

Open woodland, grassy fields, bamboo groves, and wet areas such as ditches, rice paddies, and streams. May be found in villages and suburban areas. Found at elevations up to 1,300 meters.

Activity and behavioral patterns:

Nocturnal. Rarely seen during day except during and after rain. Hides under stones or in holes during the day. Hibernates from November to April. Not aggressive, especially during daylight hours; prefers to escape from potential threats. If escape is impossible, it hides its head beneath mounded coils of its body. More aggressive at night.

Venom's effects:
Extremely potent neurotoxin. Local symptoms are minimal; bite felt as a prick followed by slight itching, numbness, or redness, with minimal swelling. Systemic symptoms include nausea, vomiting, ptosis, inability to speak, swallow, or open mouth, chest tightness, breathlessness, generalized aching, and weakness of limbs. Many fatalities reported.

Oriental Coral Snake

Description:
Adult length is 0.3 to 0.5 meter; maximum of 1.0 meter. Narrow body; diameter the size of a finger. Background color variable; color either russet to pink, with narrow, widely separated black crossbands and wide cream band across the base of the head, or brown to crimson, with three longitudinal black stripes from head to tail, and a narrow cream headband. Head is small, barely distinct from neck.

Habitat:
Scrub jungles and monsoon forests. Often found near human habitats. Avoids dry terrain.

Activity and behavioral patterns:
Nocturnal, remaining hidden during the day within humus of forest floor, or beneath logs, stones, and other debris. Occasionally active in early morning.

Venom's effects:
Likely neurotoxic. Little is known of venom. Few bites recorded. One fatality reported from Nepal.

Russell's Viper

Description:

Adult length usually 1 meter to 1.3 meters; maximum of 2 meters. Background color varies from pale grayish brown through reddish brown to dark brown. Dorsal and lateral series of black or brown, round or oval spots edged with black and white. Belly white with large black spots. Light V- or X-shaped marked on top of head.

Habitat:

Paddy fields and other agricultural land, open, rocky, bushy, or grassy terrain up to elevations of 3,000 meters. Does not occur in dense forests.

Activity and behavioral patterns:

Predominantly nocturnal but active by day during cool weather. Terrestrial. Coils up in striking position, inflates lungs, and emits loud sustained hisses when threatened. Short-tempered and very aggressive. When disturbed, strikes with great force and speed.

Venom's effects:

Extremely potent hemotoxin. Major cause of snakebite mortality, especially among rice farmers. Symptoms may include local pain and swelling, vomiting, abdominal pain, and diarrhea. Bleeding from gums, upper gastrointestinal tract, and urinary tract may develop within hours. May develop acute renal failure.

Sharp-nosed Pit Viper or Hundred-pacer

Description:

Adult length 0.8 to 1.0 meter; maximum of 1.5 meters. Stout snake. Background color light brown or gray-brown with a series of dark brown lateral triangles on each side. Pointed tops of two opposite triangles join mid-dorsally, creating an effect of alternating triangles of different color. A row of large, black spots extends along each side near the belly. Top and upper sides of head is uniformly black, with a straight, black postocular streak. Belly is yellow, spotted with dark brown. Entire color scheme is like that of the United States' copperhead. Large, triangular head with distinctive long, upturned snout.

Habitat:

Usually low mountain slopes or rocky hills with small valleys. Also found in forested mountains up to 1,400 meters in elevation, and low coastal areas at 100 meters in elevation. During the day, it can be seen on rocks or among vegetation along streams, where it blends well into surroundings.

Activity and behavioral patterns:

Active at night or in evening. Appears sluggish, but strikes and bites vigorously when aggravated. Remains in coiled position, ready to strike. During autumn, it hunts for rodents in or near rice paddies, in gardens, along roadsides, or in houses.

Venom's effects:
Potent hemotoxin; strongly hemorrhagic. Local symptoms include severe pain and bleeding, which may begin immediately, followed by swelling, blistering, necrosis, and ulceration. Systemic symptoms manifest early and suddenly, and include palpitations, dim vision, hematuria, hemoptysis, bloody stools, purpura, and anuresis. Many fatalities recorded.

Chinese Cobra

Description:
Adult length 1.4 to 1.6 meters; maximum 2.0 meters. Fairly heavy-bodied snake. Background color varies from gray-brown to black; belly is pale. Back of hood is unmarked, or with pale, black-edged band with central dark spot or spectacle marking. May have a dark band across the throat. May have narrow white transverse lines along the length of its body, which is more prominent in juveniles.

Habitat:
Common in various habitats, including rice fields, marsh areas, forests, and human settlements.

Activity and behavioral patterns:
When threatened, it rears up and spreads its hood. Capable of spitting venom into the face of an aggressor.

Venom's effects:
Primarily neurotoxic; also cytotoxic. May cause immediate pain and swelling at site, followed by blistering and discoloration. Within

hours after bite, victim may have vomiting and abdominal pain followed by drowsiness, ptosis, and inability to open mouth or speak. If venom contacts eyes, it may cause immediate, burning pain with inflammation and permanent blindness. Fatalities reported.

Monocellate Cobra

Description:
Adult length may exceed 1.5 meters. Color and pattern varies widely. Background color yellow, yellow-tan, brown, greenish brown, olive, or black; may show alternate wide and narrow transverse dark bands. Dorsal aspect of hood commonly has white annular marking, with black center and rim resembling an eye. May have transverse band with central "eye," or lack marking altogether. Ventral surface of neck paler or yellowish with broad, dark band.

Habitat:
Resides in virtually all habitats except dense forests; frequently found in cities and villages. Most common cobra in much of Southeast Asia. Shelters in areas such as rock piles, termite mounds, fallen logs, mammal burrows, and building foundations.

Activity and behavioral patterns:
Most active at twilight, but may bask in sun during day. Does not "spit" venom at aggressor.

Venom's effects:
Potent neurotoxin and cytotoxin. Pain and swelling often followed by blistering and extensive necrosis. Neurotoxic symptoms may include ptosis, drowsiness, dysphagia, dysphonia, and generalized weakness. Reports of mortality high.

King Cobra

Description:

World's largest venomous snake. Adult length usually 3 to 4 meters; maximum of about 5.5 meters. Background color olive, brown, or greenish yellow, becoming darker on tail. Head scales edged with black. Throat yellow or orange, sometimes with dark markings.

Habitat:

Found in open country, cultivated areas, dense or open forests, bamboo thickets, dense mangrove swamps, and hilly jungles. Often found near streams. Range extends from sea level up to 1,800 meters elevation. Species widespread but uncommon.

Activity and behavioral patterns:

Diurnal and very active. Primarily terrestrial, but sometimes found in trees and water. Constructs elaborate nest of dead leaves and other decaying vegetation. Unlikely to attack unless provoked. When confronted, expands hood and may rise as high as 1.8 meters. When angry, gives deep resonant hiss similar to growl of small dog. Reports of aggressiveness and unprovoked attacks likely untrue.

Venom's effects:

Potent neurotoxin. Severe local pain and tenderness almost immediately following bite. Bites uncommon, but usually severe and may be rapidly fatal.

Mountain Pit Viper

No Photograph Available

Description:

Adult length usually 0.6 to 0.8 meter; maximum of 1.1 meters. Relatively thick-set snake. Background color light olive, reddish, or orange-brown; one or two dorsal rows of squarish patches meeting or alternating at vertebral line. Belly pale, spotted with brown. Dark brown or black triangular head, distinct from neck.

Habitat:

Inhabits mountains or plateaus from coastal lowlands up to more than 2,000 meters elevation. Found in tea fields, cultivated areas, under shrubs, and among vegetation. Often found near human habitation and sometimes in homes.

Activity and behavioral patterns:

Semi-arboreal, but commonly found on forest floor near streams. Sluggish disposition, but ready to bite when irritated.

Venom's effects:

Hemotoxic. Reported symptoms include severe local bleeding and swelling, thrombocytopenia, and coagulopathy.

Red-necked Keelback

Description:

Adult length usually 0.6 to 0.7 meter Background color olive, greenish gray, or greenish brown with indistinct flecks of black and yellow which may appear as a mid-dorsal stripe. Neck and forepart of body vivid red; sides of head yellow, with sub-ocular black streak.

Habitat:
Brush-covered or grassy fields adjacent to streams, ditches, and paddies.

Activity and behavioral patterns:
Primarily diurnal and terrestrial. When threatened, rears forepart of body and spreads hood.

Venom's effects:
Primarily hemotoxic. Bite may be painless with minimal local swelling. Symptoms may include headache, nausea, and vomiting.

Yamakagashi

Description:
Adult length is 0.8 to 1.0 meter. Background color is variable, from uniform greenish brown with a pale belly, to striped pattern with black bands on a red or greenish brown background.

Habitat:
Most common in fields and mountain forests.

Activity and behavioral patterns:
Primarily diurnal and terrestrial. When threatened, it rears and spreads its hood.

Venom's effects:
Primarily hemotoxic; symptoms may include local swelling, bleeding from wound site, bleeding gums, and hematuria. Brain hemorrhage and acute renal failure reported. Nuchal glands release defensive secretions when pressure is applied to the snake's skin. Secretions may damage eyes on contact.

Chinese Bamboo Pit Viper

Description:
Adult length usually 0.6 to 0.7 meter; maximum of 1 meter; fairly stout snake. Background color uniform leaf to chartreuse green; no markings except thin white, yellowish white, or red and white longitudinal stripe along each side of body. Belly pale green; tail rust colored. Distinctive rusty brown or brick red eye, flecked cream color.

Habitat:
Bamboo thickets, bushes, and trees along water courses; found more frequently on hillsides then on level terrain.

Activity and behavioral patterns:
Arboreal and nocturnal. Sluggish. Calm disposition, but strikes quickly if surprised or brushed against while in arboreal shelters. When threatened, may wind into coil and vibrate tail as warning.

Venom's effects:
Primarily hemotoxic. Symptoms include severe local pain, oozing from fang marks, extensive local swelling, bruising, nausea, and vomiting. Fatalities recorded.

White-lipped Green Pit Viper

No Photograph Available
Description:
Adult length usually 0.4 to 0.6 meter; maximum of 0.9 meter. Relatively long thin snake with triangular-shaped head, very dis-

tinct from neck. Background color uniformly green, varying from yellowish green to bright grass green. May have darker crossbands on scales and interstitial skin. Belly pale yellowish white to dark green. Upper lip white or pale green. Entire side of head, below eye, white, pale yellow, or light green. Dorsal surface of tail reddish brown.

Habitat:

Prefers open country at low elevations. Frequently found around human habitations and in gardens.

Activity and behavioral patterns:

Mainly nocturnal and arboreal; rarely seen on ground except after dark. Relatively slow moving and unaggressive, except when thoroughly annoyed. However, when defending itself, strikes and bites vigorously.

Venom's effects:

Primarily hemotoxic. Symptoms may include local pain, swelling, bruising, and tender enlargement of local lymph nodes. Systemic symptoms may include nausea, vomiting, diarrhea, abdominal pain, lethargy, gastrointestinal bleeding, and hematuria. Bites common. Fatalities recorded.

Steppe Viper, Orsini's Viper

Description:

Adult length usually 0.4 to 0.5 meter; maximum of 0.65 meter. Background color gray, yellow, green, or light brown. Belly usually light or dark gray, sometimes with yellow markings. Completely black specimens reported. Dark, wavy, zig-

zag line with black edges down center of back from head to tail; may be discontinuous. Head oval, narrower than that of other vipers; distinct from neck. Snout rounded, slightly upturned. Dark line extending from each eye to corner of mouth.

Habitat:

Found in dry plains, flatlands with few trees or bushes; more common at higher elevations. Also found on wooded hillsides in mountainous regions. Generally seeks open areas near dry clay or loamy soil. Hides in rodent dens and small animal burrows.

Activity and behavioral patterns:

Primarily diurnal, but may be nocturnal during hot summers months. More active than other vipers; can move rapidly. Hibernates during winter months. Not aggressive; avoids human confrontation. Seldom bites, even when bothered, but will bite if continuously disturbed, stepped on, or handled roughly.

Venom's effects:

Mildly hemotoxic. Envenomation causes local pain and swelling followed by dizziness. Recovery usually relatively rapid.

Chinese Habu, Taiwanese Pit Viper

No Photograph Available

Description:

Adult length usually 0.8 to 1 meter; maximum of 1.3 meters. Relatively long, thin snake. Background color light brown or grayish brown; vertebral row of large purplish brown or chocolate-colored spots sometimes edged with yellow line. Lateral row of dark circular blotches. Belly white with brown dots. Large triangular head with dark markings; thin neck. Postocular line to angle of jaw, dark with pale mark above.

Habitat:
Open agricultural country and forests up to 1,400 meters elevation. Bamboo forests, shrubs, stream banks, tea fields, and around human dwellings.

Activity and behavioral patterns:
Generally nocturnal but may be seen during day. Terrestrial. Generally slow moving. Disposition varies; some vicious and strike when tormented, others docile and sluggish. Usually will strike when cornered.

Venom's effects:
Potent hemotoxin. Bites usually cause severe local pain and swelling which may involve entire affected limb with tender enlargement of regional lymph nodes. Systemic symptoms may include nausea, vomiting, epigastric pain, fever, and shock, which may cause impaired consciousness or generalized convulsions. Peripheral leucocytosis common. Fatalities recorded.

Dangerous Invertebates

Scorpions

Although scorpions in the region are capable of inflicting a painful sting, none are known to be life-threatening.

Spiders

Although there are several spider species found in the region that are capable of inflicting a painful bite, in-

cluding some very large and physically imposing tarantulas, none are known to be life-threatening.

Insects

There is little specific information of medical importance regarding insects. However, nearly all countries have at least one species of moth having venomous/urticating hairs and/or whose larva (caterpillar) has venomous spines. Some caterpillars are very hairy (such as puss moths and flannel moths) and almost unrecognizable as caterpillars, with long silky hairs completely covering the shorter venomous spines. Others bear prominent clumps of still, venomous spines on an otherwise smooth body. Contact with these caterpillars can be very painful. Some are brightly colored.

Paederus are small (usually 4 to 7 millimeters), slender rove beetles that do not look like typical beetles and have very short wing covers that expose most of their flexible abdomens. When crushed, their body fluid contains an agent that will blister skin on contact. The lesions take about a week to heal and the area remains painful for several weeks. The substance is extremely irritating if it gets into the eyes; temporary blindness has been reported.

Centipedes

Although area centipedes are capable of inflicting a painful bite, none are known to be life-threatening.

Millipedes

Millipedes do not bite and in general are harmless to humans. However, when handled, some larger millipedes (may be more than 50 centimeters long) secrete a very noxious fluid that can cause severe blistering upon contact; some can squirt this fluid at least 2 feet.

Dangerous Plants

Blistering Ammania

Photo not available

Mechanisms of toxicity:

Found mostly in wet places; has an extremely acrid sap that produces intense pain and blistering on contact with skin

Comments:

Often confused with loosestrife plants in the primrose family.

Wood nettle

Photo not available

Other names:

Moroides, stinger, gympie

Mechanisms of toxicity

The leaf edges, stems, stalks and fruit-bearing parts have stiff, sharp, stinging hairs — frequently not conspicuous. On contact the hair tips break and an extremely irritating liquid is injected into the skin. Light contact results in intense burning pain. Poses

a serious threat to forestry workers and jungle troops. Death was reported regarding a man who contacted the dried bark.

Comments:
Tends to be particularly thick in areas of regrowth or replanted forests. Chopping or slashing the bushes can produce prolonged sneezing and intense throat irritation. Light contact tends to be more painful than strong contact — described as tingling interspersed with sharp, stabbing pains accompanied by red inflammation with a large flare area.

Mango

Other name:
Indica.

Mechanisms of toxicity:
The leaves, stem and fruit's skin on this tree contain urushiol and other similar long-chain phenois. Other allergens are also present. Dermatitis can occur from eating the fruit with the skin intact. Blisters may be confined to the lips and face, or can be generalized. Climbing the tree can result in severe dermatitis. There is also immediate hypersensitivity in some individuals. Ensuring the fruit is peeled prior to ingestion can prevent the reaction.

Comments:
Genus includes 35 species, usually large trees, primarily in Indomalaysia. Frequently found near human dwellings. These trees grow from 40 to 100 feet, and have lance-shaped leaves. Cultivated varieties have excellent fruit (in some wild-growing plants the fruit is unpleasant) edible raw or cooked. Ground seed is used as a flour; its fruit is used in chutney, pickles, squashes, etc.

Velvet Bean

Other names:
Cowitch, cowhage, pica-pica, ox eye bean, horse-eye bean.

Mechanisms of toxicity
Many of the species' pods and flowers are covered with irritant hairs (proteolytic enzymes). Can be dangerous if they become embedded in the eye. Beans tend to be foul tasting, even after thorough boiling, so little danger of ingestion exists.

Comments:
Many species are widely naturalized.

Marking Nut Tree

No Photograph Available
Other names:
Tar tree, anacardium

Mechanisms of toxicity
Often occupied by biting ants. Many of the plants have reputations for causing severe contact dermatitis. Anacardium fruit may drip a black, oily resin that hardens like lacquer. The resin can also produce a severe dermatitis. Toxic principles are similar to mango tree or poison ivy.

Comments:
Tree indigenous to India; used to make a liquid used to mark laundry in India and Malaysia. Fleshy swollen basal parts of the fruits are edible.

Panama Tree

Other names:
Castano, tartargum.

Mechanisms of toxicity
Seeds are edible, but pods have internal stiff bristles that easily penetrate skin, causing intense irritation.

Comments:
There are 200 tropical species.

Modikka

No Photograph Available

Mechanisms of toxicity
The root is reported to contain prussic acid and a cyanogenic glycoside, which is destroyed by drying. It also contains a toxalbumin called modeccin, which is a protein-synthesis inhibitor. The usual poisoning scenario is that of the root being mistaken for an edible tuber, especially in situations of scarce food. Death has occurred after ingestion of the fruit. Symptoms within one day are mainly due to the hydrocyanic acid; the toxalbumin results in illness a few days later. Used in India as a "worming" medicine; sap is very irritating. Has been used in Africa to murder.

Comments:
Some species have been used in Africa as medicinals (e.g., for malaria and leprosy).

Stinging Nettle

Other names:
Roman nettle, Roman nettle, dog or small nettle.

Mechanisms of toxicity:
Brushing against the plant shears off a protective cap from specialized siliceous stinging hairs, allowing skin puncture. After puncture, an irritant liquid is released that can contain several pro-inflammatory mediators including alkaloids, histamine, acetylcholine, and 5 hydroxytryptamine. These substances cause the immediate reaction after a nettle sting. The term "urticaria," describing the characteristic skin eruption, is derived from the genus name. Thought to be a defense against browsing animals; usually does not involve a hypersensitivity reaction. Stinging can persist at the site for more than 12 hours after clinical features of urticaria have disappeared. This persistence of symptoms is due to secondary release of inflammatory mediators, or persistence of implanted hairs.

Comments:
Genus of 30 species, usually perennial, single-stalked herbs less than 0.3 meter (1 foot) in height, found mainly in northern temperate areas. The tender tips are used as a leafy vegetable in some locales; simmering in water renders the stingers ineffective.

Lily of the Valley

Mechanisms of toxicity

Contains more than 20 cardiac glycosides (e.g. convallatoxin). Quickly fatal potential. Has caused death; children are attracted to its pretty flowers and bright berries; poisons have occurred from drinking water from a vase in which flowers were placed. Has been mistaken for wild garlic and made into soup. Used as an arrow poison in Africa.

Comments:

Dried roots made into many medicinals, especially in Russia.

Freshwater Mangrove

No Photograph Available

Other names:

Putat, bitung, laut.

Mechanisms of toxicity

Saponins and hydrocyanide have been isolated from fruit and seeds. Used as fish poisons in many Pacific islands. Fruit contains a triterpenoid saponin, and the seeds are emetic and have been shown to induce hypoglcemia in rodents.

Comments:

Large tree found growing along shorelines; have large (20-38 centimeters-long, 10-15 centimeters-wide) non-toothed leaves, white to pink flowers (on individual stalks; square in cross section), and one-seed-

ed fruits (9-13 centimeters-long; square in cross-section). Seeds are crushed and used as fish poison by Australian troops and aborigines.

Rattlepod

Other names:
Rattlebox, rattleweed, chillagoe, horse poison.

Mechanisms of toxicity
Contains pyrrolizidine alkaloids (monocrotaline, heliotrine, retrosine); can kill. Low-level ingestions can cause lung damage; high levels will damage the liver. Some species have caused toxicity through the contamination of flour or when incorporated in teas.

Comments:
The fruits are inflated dehiscent legumes (pods) with parchment-like walls; the ripe seeds come loose within the pods and rattle when shaken. The flowers are pea-like. Found in open woods, roadsides, margins, sandy soils, and fields.

Snake's Head

No Photograph Available
Other names:
Guinea flower, Crown imperial.

Mechanisms of toxicity
Many contain veratrum alkaloids, used in some areas as medicinals.

Comments:
This genus has 100 species from western Europe and the Mediterranean to eastern Asia, but only a few have been clearly implicated as etiology of dermatitis.

Foxglove

Other names:
Fairy bells, lady's thimbles, lion's mouth, digitalis.

Mechanisms of toxicity
Entire plant contains irritant saponins and numerous digitalis glycosides.

Comments:
A tall-growing evergreen with hairy leaves and trumpet-shaped flowers. Sucking the base of the flowers for the sweet taste or drinking water from vase in which they were placed has caused many poisonings. Fatalities have also occurred from mistaking the plant for other herbs for tea.

Bulb Yam

Other name:
Air potato, wild yam.

Mechanisms of toxicity
Bulb yam, air potato, and wild yam have tubers that contain diosgenin, a steroidal saponin, the alkaloid dioscorine, and a norditerpene lactone (diosbul-

bine). They and some other yams are poisonous when eaten raw. Causes gastroenteritis (nausea, bloody diarrhea). Some individuals eat them after special preparation. Has been used to commit murder. Found mainly in the lowlands.

Comments:
A prickly climber with a cluster of tubers just below the soil surface. Considered the chief "famine-food" of the tropical East. Poisonous unless properly prepared. Other species of this genus are good to eat with no special preparation, such as goa yam and buck yam.

Heliotrope

Other names:
Cherry pie, scorpion's tail, Indian heliotrope.

Mechanisms of toxicity
Contains pyrrolizidine alkaloids. Cause of large epidemics (Afghanistan, India) of illness following ingestion of bread made with flour contaminated with members of this genus. The pathologic effects (Budd-Chiari syndrome) take weeks to months, and death comes slowly over years. Chronic copper poisoning has occurred associated with this plant.

Comments:
A large genus of worldwide distribution (250 tropical and temperate trees and shrubs).

Coca

No Photograph Available

Mechanisms of toxicity

Natives of the Peru-Bolivia region chew the leaf for its stimulating effect. The source of cocaine.

Comments:

Growth is markedly affected by the environment, especially temperature. Fruit is bright red, pointed, succulent. Found in the upland soils of tropical South America, cultivated in the lowlands of various tropical areas.

Black Henbane

Other names:

Insane root, fetid nightshade.

Mechanisms of toxicity

Old well-known medicinal and deadly poison (hyoscyamine, atropine) with many uses in many cultures. Tropine alkaloids in the seeds (in a pod); has resulted in death; dermatitis (low risk).

Comments:

Erect, hairy annual with coarse, hairy stems 1-5 feet tall, native to Europe. Found in “weed communities” along roadsides on nutrient-rich sandy soils and loam. Dusky yellow flowers with violet veins. Fruits are capsules containing many black seeds (can be confused with the poppy plant seeds).

Kamyuye

No Photograph Available

Mechanisms of toxicity

Contains latex with a mixture of sequiterpene alcohols. Has long been used as a medicinal. Used in Africa as a poison. Accidental fatalities have occurred when the bark was used to prepare a medicine for stomach problems.

Comments:

Tropical African aromatic shrub. Source of vanilla-scented oil.

Chinaberry

Other names:

White cedar, African lilac, bead tree

Mechanisms of toxicity

Yellow globose berry with three to five smooth, black, ellipsoidal seeds; has a resin; all parts have a saponin, triterpene neurotoxins, and a gastrointestinal irritant of uncertain chemical nature. Widely varying genetic variable toxicity. Has killed adults.

Comments:

Widely cultivated.

Annual/French Mercury

No Photograph Available

Other names:

Dog's Mercury

Mechanisms of toxicity

Native to Europe; entire plant is toxic. Has been mistaken for edible greens. Emetic and purgative. Has proven fatal.

Comments:
Dye source; carpeting rhizome herb often characteristic of disturbed woodland.

Balsam Apple

Other names:
Leprosy gourd, bitter gourd, cucumber gourd

Mechanisms of toxicity
Seeds and outer rind of ripe fruit contain a toxalbumin called momordin; the ripe fruit also has an hypoglycemic agent. Small amounts cause headache, flushing, salivation, dilated pupils, emesis, diarrhea, abdominal pain. Can kill.

Comments:
A slender vine with small yellow flowers. Fruits have a rough outer rind, variable shape but like a gourd, usually yellowish with reddish pulp.

Pokeweed

Other names:
Pokeberry, poke salet.

Mechanisms of toxicity:
Mature stems, roots, and berries are poison (saponins mostly in foliage and roots). Death possible when not prepared properly.

Comments:
Young shoot tips, less than 6 inches, are eaten in many cultures, including Canada; requires proper preparation (boiled with water changes; water contains toxic substances — kills snails that carry bilharzia). Dye from berries used to color ink, wine, sweets.

Burn Bean

No photograph available
Other names:
Colorines, mescal bean, red hots, necklace pod sophora, silver-bush, pagoda tree.

Mechanisms of toxicity
Dark to bright red beans in woody pods are hallucinogenic; used by American Indians before peyote was discovered. Seeds and flowers are very poisonous, causing convulsions; has caused death. One seed can kill a child. Cytisine acts much like a nicotinic ganglionic stimulation agent.

Comments:
Fruit is source of a yellow dye. Dried flowers are sold as medicinal in Indonesia; used for bleeding problems.

May Apple

Other name:
American mandrake

Mechanisms of toxicity:
A dangerous plant used in many folk-remedies. The podophyllin resin is in all parts; the rootstock, leaves, and unripe fruit contain the toxin podophylloresin (purgative), the glycoside podophyllotoxin

(a lignan), and the antimitotic peltatin. All parts are poisonous except the ripe fruit, which is edible. Ingestion results in vomiting and severe diarrhea; fatalities have resulted from repeated ingestion or topical application of an extract of the rootstock. Was used by Amerindians for suicide.

Comments:
Found in east Asia, the Himalayas, and North America. Historically used by many cultures as a medicinal.

Black Nightshade

Other names:
Deadly nightshade, common nightshade, horse nettle, bittersweet, Jerusalem cherry, nipple fruit, quena, wild tomato, apple of Sodom, white-edged nightshade.

Mechanisms of toxicity
The fruit of the Jerusalem cherry is a black berry; the fully ripe berries are eaten; unripe berries contain solanine alkaloids, which can cause gastroeritis, weakness, circulatory depression. Can kill

Comments:
Approximately 2,000 species of herbs, vines, shrubs covered with small star-shaped hairs. Perfect white, yellow, or blue flowers. Berries have dry or juicy pulp and several seeds.

Strychnine

Other names:
Nuxvomica tree, Snakewood tree

Mechanisms of toxicity:
The entire plant, including the seeds, contains the powerfully acting indole alkaloid strychnine, which can kill.

Comments:
Genus of 190 different species of trees, shrubs and vines with berry-like fruits, found in most tropical regions. Some have the reputation of having edible fruit despite dangerous seeds. It is a source of curare obtained by stripping and macerating its bark. Curare, now used as a muscle relaxant, was formerly used as an arrow poison by South American Indians.

English Yew

Other names:
Groundhemlock,American yew, Japanese yew.

Mechanisms of toxicity:
Taxine A and B, classed as steroid alkaloids, are present in all plant parts except the aril. A single chewed seed is deadly. An hour after ingestion, nausea, dizziness, and abdominal pain begin. This is followed by reddening of the lips, dilatation of the pupils, shallow breathing, tachycardia, and coma. Then the pulse slows, blood pressure drops, and death occurs through respiratory paralysis. No proven treatment exists. Emptying the stomach hours after ingestion may be helpful as leaves may not pass through the GI tract expeditiously. Various

clinical measures (circulatory stimulants, artificial respiration, cardiac pacemaker) have not prevented death in suicide cases.

Comments:
An evergreen shrub or small tree bearing a characteristic fleshy, red, sweet-tasting aril with a single green to black, partly exposed, hard-shelled seed within. In North America, the Japanese yew, the toxicity of which may exceed that of the English yew, has repeatedly caused fatal animal poisonings. Was once known as the "tree of death."

Trumpet Creeper

Mechanisms of toxicity:
Causes contact (allergic type) and irritant dermatitis.

Comments:
Woody climbing vine with fluted pink and orange flowers.

Freshwater Mangrove

No Photograph Available
Other names:
Putat, bitung, laut.

xMechanisms of toxicity:
Saponins and hydrocyanide have been isolated from fruit and seeds. Used as fish poisons in many Pacific islands. Fruit contains a triterpenoid saponin, and the seeds are emetic and have been shown to induce hypoglcemia in rodents.

Comments:
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APPENDIX J:
INTERNATIONAL TELEPHONE CODES

Algeria	213	Malta	356
Australia	61	Mexico	52
Austria	43	Morocco	212
Bahrain	973	Netherlands	31
Belgium	32	Nigeria	234
Brazil	55	New Zealand	64
Canada	1	Norway	47
China	86	Oman	968
Cyprus	357	Philippines	63
Denmark	45	Portugal	351
Djibouti	253	Qatar	974
Egypt	20	Republic of Korea	82
Ethiopia	251	Saudi Arabia	966
Finland	358	Senegal	221
France	33	Seychelles	248
Gabon	241	Singapore	65
Germany	49	Somalia	252
Greece	30	South Africa	27
Hawaii	1	Spain	34
Hong Kong	852	Sweden	46
Indonesia	62	Switzerland	41
Iran	98	Syria	963
Iraq	964	Taiwan	886
Ireland	353	Tanzania	255
Israel	972	Thailand	66
Ivory Coast	225	Tunisia	216
Japan	81	Turkey	90
Jordan	962	UAE	971
Kenya	254	United Kingdom	44
Kuwait	965	United States	1
Libya	218	Yemen	967
Madagascar	261	Zambia	260
Malaysia	60	Zimbabwe	263

AT&T (public phones)	0072-911 or 0030-911	On Base	550-HOME or 550-2USA