

DINO WARS!

ARMY VS. DINOSAURS: THE FIGHT IS ON!

BY TOM MOLDVAY

Private Bill Smith crouched behind a boulder—not that the rock offered much protection from dinosaurs. But old habits die hard, and a soldier is trained to seek cover. Out in the mists, he heard the great beasts roaring. Bill took a deep breath and double-checked his loads. It wouldn't be long now.

The roaring grew nearer, and the ground shook. Bill wished he'd signed up for the tank corps. At least tankers had some protection.

The mist parted and a horror emerged. It was an allosaurus, as high as a second-floor window and as long as a house. Its brownish-gray skin glistened in the misty light. But all Bill had eyes for were its dagger-like claws and gaping mouth, filled with teeth that could rip a person in half.

The rest of Bill's squad spotted the dinosaur and opened up. Sharp rifle cracks filled the air. Off to his right, the staccato sputtering of the squad's machine gun could be heard. Bill didn't bother to aim. He just pointed his rifle and fired. The allosaurus was so big you couldn't miss. The problem was hitting a vital area. The beast didn't have any. Only massed fire would bring it down—if they were lucky.

They weren't.

The allosaurus lumbered right through the hail of gunfire, which merely made it angrier, and smashed into the skirmish line a dozen yards to Bill's left. Bill heard a crunching sound, then a horrible scream that ended in

the gurgling cry of "Mother!" It sounded like PFC Sam Moran, but the screaming was so different from Sam's normal voice that Bill couldn't be sure.

"You dirty lizard! You killed Sam! Eat lead, lizard spawn!" The shouting was from Sergeant Savage, who had been in line next to Sam. Cradling a tommy gun in her hands, the sergeant leaped from cover and ran straight for the allosaurus, firing burst after burst until her weapon was empty. The bullets stitched into the monster, which bellowed in rage and pain.

Sergeant Savage ripped a hand grenade from her belt. Pulling the pin with her teeth, she lobbed the grenade at the dinosaur's head. Then she dove to earth.

The explosion ripped into the allosaurus, blowing apart its jaw and half its neck. The dinosaur took one hesitant step forward—then it toppled. The earth shook with the impact of its fall.

A ragged cheer rang out from the squad.

The allosaurus was dead. They were still alive. But they had little time for celebrating. Out in the mists, Bill could already hear yet another wave of dinosaurs massing for the attack.

DINO WARS! is a set of miniatures rules that simulates combat between dinosaurs and army soldiers. The emphasis is on fictional combat as it appears in grade-B science-fiction movies and novels. The result is a set of rules that are easy to learn, with play that is both fun and fast.

All that's required for a game of DINO WARS! are these rules, some miniature soldiers and dinosaurs (cheap, colorful, plastic ones are best), a ruler or yardstick, and two six-sided dice (d6).



Two players are required (one for the army and one for the dinosaurs), although more can be added (to run several squads of soldiers or groups of dinosaurs).

DINO WARS! is broken down into game turns. Each game turn has five phases that must be completed in order. The game continues until one side is completely eliminated or one side fulfills its mission.

SEQUENCE OF PLAY

1. Dinosaur Movement Phase
 - 1a. Closing fire
 - 1b. Overrun attacks
2. Regular Fire Phase
3. Dinosaur Attack Phase
4. Army Movement Phase
5. Secondary Fire Phase

1. DINOSAUR MOVEMENT PHASE

All dinosaurs can move during this phase. Each dinosaur can move any distance to the limit allowed by its movement rate, given in scale inches on the Dinosaur Statistics table (with modifiers from the Dinosaur Movement Modifiers table, as appropriate). Flying movement is measured specially, with both horizontal and vertical factors counted together for a

MOVEMENT AND ATTACKS

The controlling player always has the choice of how figures move and attack. Thus, a player could move one dinosaur and make all its overrun attacks before moving the next dinosaur. Likewise, soldiers need not declare their targets ahead of time. They might fire at one dinosaur until they kill it, then switch to another target. The choice of the order of movement and fire is part of the strategy of the game.

total movement rate (for example, a pterodactyl moving 12" upward and 24" forward has moved 36" total). If a dinosaur makes overrun attacks (see "Closing Fire and Overrun Attacks," below), there is a 2" movement penalty per overrun attack. If the optional rules are being used, there is also a 2" penalty for any unusual terrain (see "Optional Rules").

Closing Fire and Overrun Attacks. The Dinosaur Movement Phase has two special subphases. If a dinosaur makes contact with a soldier or vehicle figure, and the monster decides to make an overrun attack (for example, it decides to stamp on the army figure), the defender gets a chance to shoot before the dinosaur can attack. Such shooting is called closing fire.

All hand weapons, except grenades, can be used during closing fire. A soldier firing a hand weapon



in closing fire does not need to worry about line of sight, and is able to see the dinosaur perfectly well. All machine guns can also fire, but each requires a line of sight to do so (they're harder to move). Line of sight for a machine gun extends in a 180-degree arc to its front. Thus, a machine gun nest taking an overrun attack from the rear will not get closing fire. Other weapons, such as a tank gun or a mortar, do not get closing fire.

A vehicle gets closing fire only if it has a machine gun mounted on it, and if the gun has a line of sight to the dinosaur. Only one closing-fire attack per figure can be made. A figure attacked by more than one dinosaur gets closing fire only on the first dinosaur to attack.

A dinosaur that makes contact with a soldier or a vehicle during movement can make an overrun attack, which slows the dinosaur down, subtracting 2" from its movement rate. If a dinosaur does not have at least 2" of movement left when it makes contact, an overrun attack cannot be made. (Any dinosaur killed during closing fire is eliminated and gets no further attacks.)

If the overrun attack succeeds and the soldier is killed or the vehicle destroyed, the dinosaur can continue movement. The dinosaur can keep moving and making overrun attacks as long as it has enough movement to pay the overrun cost, and as long as each overrun attack succeeds.

An overrun attack fails if the defender survives. The defender survives if the attacking dinosaur rolls a miss, if the dinosaur doesn't destroy a vehicle (see "Damage"), or if the soldier is a special figure who makes a successful luck roll (see "Special Army Figures" and "Damage").

If an overrun attack fails, the dinosaur ends its movement in contact with the defender, and play continues normally. The defender cannot make closing fire, but might be able to fire again during the Regular Fire Phase. The dinosaur can attack again (providing it survives regular fire) during the Dinosaur Attack Phase.

The choice of whether or not to make an overrun attack is up to the dinosaur player. A player can always choose to stop movement for a dinosaur and not make an overrun attack. The dinosaur can still attack normally, however, just as the soldier can fire normally.

Example. A tyrannosaurus with a movement of 18" begins the turn 4" from a line of skirmishers. The tyrannosaurus moves 4" to attack the closest soldier. The soldier fires but does not kill the monster. The tyrannosaurus kills the soldier in an overrun, thus using up 2" more movement. The next soldier is 2" away. The dinosaur moves to that target, survives closing fire, and kills the soldier in another overrun.

The tyrannosaurus has now spent 10" on movement (4 + 2 + 2 + 2).

There is a soldier only 1" away. The tyrannosaurus moves to attack, once more survives closing fire, and kills its third victim in the turn, at the cost of 3" more movement (1" movement + 2" attack cost). The fourth soldier in the skirmish line is 4" away. The tyrannosaurus moves into contact, but does not have enough movement left for an overrun. There is, therefore, no closing fire. The soldier can still shoot during the Regular Fire Phase, just as the tyrannosaurus can attack during the Dinosaur Attack Phase.

2. REGULAR FIRE PHASE

Once all dinosaur movement has taken place, and all closing fire and overruns have been resolved, the army side has the opportunity for regular fire. All weapons can be fired in this phase, provided they are within range of and have a line of sight to a dinosaur target. See the Army Weapons table for weapon details; modifiers for attack rolls are on the Army Attack Modifiers table.

Some weapons shown on the Army Weapons table can be fired twice in a turn. These are weapons that do not have to be reloaded each turn or require no special handling.

Such weapons can be fired during the Regular Fire Phase and once more in the course of the turn. The other fire attack can come either during closing fire or in the Secondary Fire Phase (but not both). Some circumstances prohibit firing more than once in a turn (for example, if the soldier is acting as a spotter for artillery fire; see "Indirect Fire").

Example. A stegosaurus tries to overrun a soldier shooting a rifle. The soldier fires during closing fire and hits the stegosaurus, but does not kill it. The stegosaurus rolls too high on its overrun attack, so the soldier survives. During the Regular Fire Phase, the soldier shoots again. The shot hits again, this time killing the stegosaurus.



3. DINOSAUR ATTACK PHASE

Once the army side has had a chance to fire all its weapons, every dinosaur in contact with a soldier or vehicle gets to make an attack. Only one attack per dinosaur can be made during the Dinosaur Attack Phase. There is no movement cost, since normal dinosaur attacks are not considered overruns.

4. ARMY MOVEMENT PHASE

After every dinosaur in contact with a soldier or vehicle has had a chance to attack, all army soldiers and vehicles are allowed to move. The movement rate for

soldiers is 6"; the movement rate for vehicles is 18" (see the Army Vehicles table and the Army Movement Modifiers table).

There is a special movement penalty for moving out of contact with a dinosaur. The penalty for a soldier is 2"; the penalty for a vehicle is 6". Thus, a soldier in contact with a dinosaur can move only 4" that turn; a vehicle in contact with a dinosaur has only 12" of movement left.

5. SECONDARY FIRE PHASE

Finally, after every army soldier and vehicle has had a chance to move, any soldier using a weapon that gets two attacks per turn and has not already fired twice gets a second shot.

Once all secondary fire is over, the turn ends. A new turn begins with a new phase of dinosaur movement.

Example. A triceratops tries to charge a tank. However, after measuring movement, the dinosaur is still 3" away. During the Regular Fire Phase, the tank fires both its cannon and its machine gun. The triceratops survives. The tank backs up 18" during the Army Movement Phase. In the Secondary Fire Phase, the tank's machine gun, but not its cannon, can fire again.

ATTACKS

Attacks are rolled using two six-sided dice (2d6). To succeed, the attack score or lower must be rolled. If the attack score is 8, a roll of 8 or lower indicates a successful attack, while a roll of 9 or higher indicates a failed attack. Attack scores are given in the Dinosaur Statistics table and the Army Weapons table (with modifiers for the latter in the Army Attack Modifiers table).

Several weapons on the Army Weapons table have two values listed, divided by a slash. The first number given is the attack score for direct fire. The second number is the attack score for indirect fire. For example, heavy artillery has an attack value of 9/7. The 9 value would be used if the artillery piece had a direct line of sight to the target dinosaur. The 7 value would be used for indirect fire (for example, if a spotter were calling down fire onto a target the artillery crew couldn't see directly).

Each army soldier uses whatever weapon the playing figure has. In the World War II era, the basic weapon is a rifle. In the modern era, the basic weapon is an assault rifle. In addition, every soldier is considered to have an unlimited amount of hand grenades. In play, few soldiers get to throw more than two before they are eaten, and unlimited grenades reduces bookkeeping for all players.

SPECIAL ARMY FIGURES

The army side can have three kinds of special figures: NCOs, leaders, and heroes (everyone else is a regular enlisted soldier). NCOs are noncommissioned officers: corporals and sergeants. They are often in charge of a fire team, section, or squad. Leaders are commissioned officers, usually lieutenants

and captains. They are the platoon and company commanders. Heroes can be of any rank selected by the army player.

Special figures should be chosen because they stand out from the rest of the figures at a glance. NCOs, leaders, and heroes are considered to always have the standard weapon of their time, along with whatever secondary weapon the figure is actually armed with. Thus, even though the actual figure is firing a pistol, a leader can shoot with a rifle (if from the World War II period) or an assault rifle (if from the modern era). Sometimes NCOs or heroes have weapons that are better than the basic ones (for example, automatic rifles).

Special figures always get a +1 modifier to the attack scores for weapons they use. Thus, an NCO firing a submachine gun would have an attack score of 9 instead of 8.

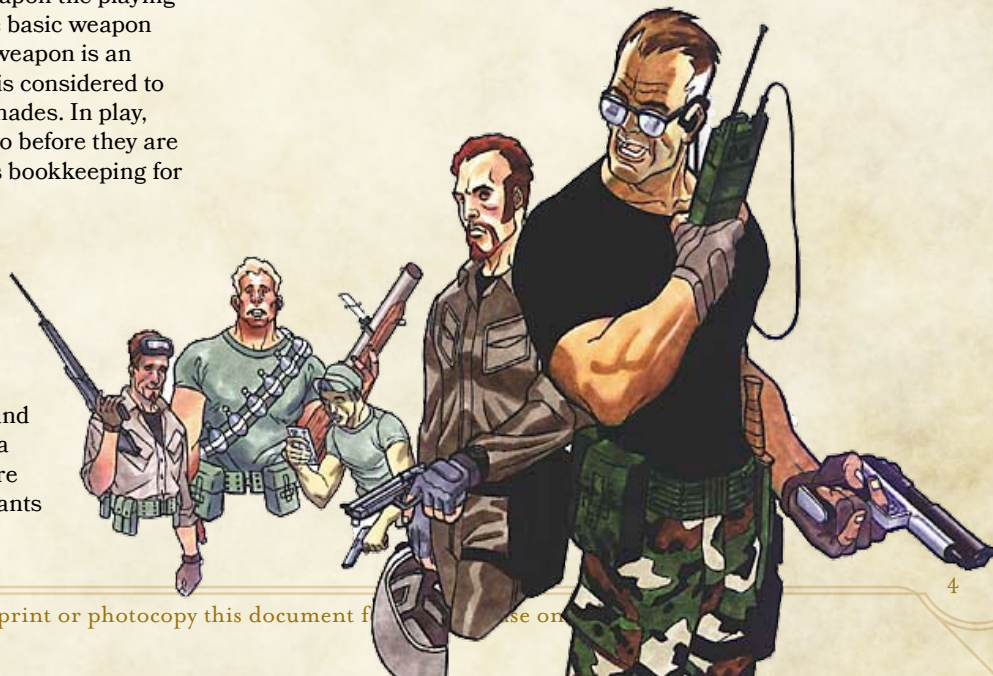
In addition, special figures are allowed to make luck rolls if successfully attacked by dinosaurs (see "Damage"). Successful luck rolls allow these figures to escape death and can also stop overrun attacks.

As a general rule, one out of every ten army figures can be a NCO. For every two NCOs, there can be one leader (usually a lieutenant or captain) and one hero (who could be of any rank). Thus a force of twenty-two soldiers could include eighteen enlisted soldiers, two NCOs, one leader, and one hero.

CREWED WEAPONS

Some large army weapons require a crew in order to be fired effectively. The minimum crew values given on the Army Weapons table are the number of soldier figures that must be designated as crew if this sort of weapon is to continue to fire each turn. If crew members fall below the minimum listed for such a weapon, a single individual can fire that weapon once only. Afterward, the weapon is considered unloaded and cannot be fired until the minimum number of crew spend one turn at the weapon without firing it (they are reloading it).

Weapon crews cannot fire their individual weapons in a turn if their crewed weapon has been or is about to be fired that turn. Thus, the army player has a choice each turn of whether to fire the weapon or all the crew's weapons. The only exception is that a crewed weapon



can never be fired if a dinosaur is in contact with it. The individual crew members must fire instead.

The +1 attack modifier for special figures does not apply to a crewed weapons attack if a special figure is part of a weapons crew. There is thus no advantage to having these figures join a weapons crew.

If a dinosaur attacks a crewed weapon, the dinosaur player has the choice of attacking either the weapon itself or the crew. Any attack that succeeds against a crewed weapon destroys that weapon.

Example. A howitzer crew has been firing at an oncoming allosaurus, which survives and keeps coming. The turn starts with the allosaurus 7" away from the howitzer. The allosaurus moves the 7" and decides to make an overrun attack on one of the crew. That individual alone is allowed to fire a rifle during closing fire, but the shot misses the allosaurus. The overrun succeeds. The allosaurus has plenty of movement left and tries to overrun another crew member. The allosaurus survives another closing-fire attack, but its own attack fails. The allosaurus ends its move in contact with the last three crew members and the howitzer.

During the Regular Fire Phase, the three crew members fire their rifles at the allosaurus. Two hit, but the allosaurus is not killed. The allosaurus then destroys the howitzer with a successful attack. The surviving crew members abandon the howitzer, moving 4" during the Army Movement Phase. Two of the three get secondary fire; the other crew member has no secondary fire after getting to make a closing fire attack.

DAMAGE

If a dinosaur's attack succeeds against a regular enlisted soldier, that soldier is killed. Special army figures have a chance to survive a dinosaur attack. On any successful dinosaur attack, a special figure gets a luck roll, as indicated on the following table.

Special Figure	Luck Roll
NCO	7
Leader	8
Hero	9

If the figure rolls the indicated luck roll or less on 2d6, the figure is only wounded and can continue to fight. (Wounding has no effect unless the optional rule for wounded soldiers is used; see "Optional Rules"). If the roll fails, the figure is killed. A special figure can be killed only by failing to make a luck roll. A hero hit by three dinosaurs must make three separate luck rolls; as long as the figure keeps succeeding on those rolls, the fight goes on. A successful luck roll ends an overrun attack just as if the dinosaur attack had failed.

Damage to dinosaurs and vehicles is different than damage to soldiers. Most dinosaurs and vehicles can take multiple hits. Dinosaurs have life points (LP). Vehicles have structural points (SP). Both concepts function essentially the same.

Dinosaurs and army weapons have damage values given on the Dinosaur Statistics and Army Weapons tables, respectively. For dinosaurs, these damage values are used only when fighting army vehicles. Ignore them when the dinosaur fights individual soldiers.

A dinosaur can continue to fight until it loses all its life points. A vehicle can continue to function until it loses all its structural points. Players must keep track of damage to dinosaurs and vehicles, either on a separate sheet of paper or on scraps of paper placed by the appropriate dinosaur or vehicle.

AUTOMATIC KILL

Certain weapons are so powerful that they have a chance to automatically kill a dinosaur. Likewise, certain dinosaurs have a chance to automatically destroy a vehicle. It takes an especially lucky roll for an automatic kill. Army weapons with an asterisk after their damage value on the Army Weapons table get an automatic kill if the player rolls a 2 on the attack dice.

Dinosaurs are a little more complicated. A dinosaur with a single asterisk after its damage value can destroy any vehicle, except a tank, on an attack roll of 2. Dinosaurs with two asterisks after their damage value can destroy a non-tank vehicle on an attack roll of 2 or 3, and can destroy a tank on an attack roll of 2. (A weapon or a dinosaur with no asterisk after its damage value can still harm a target, but it can't automatically destroy that target with one roll.)

Examples. A platoon armed with rifles faces a brachiosaurus. They must hit the creature with thirty-two successful shots before they can kill the eighty-nine-ton beast. On the other hand, a single hit from a bazooka could kill the dinosaur if the attack roll was a 2. Even if it wasn't a roll of 2, on a successful attack, the bazooka would do 3 LP damage instead of 1.

Likewise, a pterodactyl would have to hit a jeep three times to knock it out of commission. A monoclonus would take out a jeep on a single hit, since it does 3 SP damage, but the dinosaur would have to hit a tank five times to take it out. A triceratops would also have to hit the tank five times to take it out normally, but it could get lucky and destroy the tank with one hit if it rolled a 2.

ARMOR

Armor makes a figure harder to successfully attack in combat. Only dinosaurs have armor (the effects of vehicles' armor have been calculated into their structural points). The dinosaurs' armor value acts as a negative modifier to the attack score of an army attack. Thus, for a soldier attacking an ankylosaurus (armor 2) with a pistol (attack score 7), the attack would penetrate the dinosaur's bony armor only on a roll of 2 to 5.

If a dinosaur's armor value is given as two numbers divided by a slash, the first number applies to frontal attacks and the second applies to rear attacks. A dash means the dinosaur has no armor against a rear attack. Any attack within 180 degrees of the front of the dinosaur figure is considered a frontal attack. If it is uncertain whether the attack is from the front or rear, give the dinosaur the benefit of the doubt.

TRANSPORTATION

The army player might want to transport soldiers in or on vehicles for faster movement. The carrying capacity for different vehicles is given on the Army Vehicles table.

This capacity is a range of numbers, since not all vehicles of the same type are of the same size. Use the minimum values for small vehicles, the average for medium-sized vehicles, and the maximum for the largest vehicles of any particular type. A player can generally gauge by eye what carrying capacity seems reasonable for any vehicle. If difficulties arise, see how many figures can actually fit into or onto the vehicle without falling off.

Carrying capacity does not include the vehicle's crew, which includes the driver and enough soldiers to work any weapons mounted on the vehicle. Crew capacities are given on the Army Vehicles table, but these can vary depending on the type of weapons mounted on the vehicle. Every vehicle has a driver. If the vehicle has a mounted machine gun, there will be one additional crew member (that is, two crew members in total). If the vehicle has a mounted cannon, there will be two additional crew members (three total). If the vehicle has both a machine gun and a cannon, there will be three extra crew members (four total).

A tank usually has a crew of four (a driver, machine gunner, and two cannon operators), usually led by a NCO. If the army side has three tanks, one crew member can be a leader; if it has five tanks, then one crew member can be a hero.

Example. The army player has a half-track that can carry six soldiers. If the half-track had a mounted machine gun, its carrying capacity would be reduced by one. If the half-track had a mounted cannon, its carrying capacity would be reduced by two.

LOADING AND UNLOADING

It takes half a turn's worth of movement to load or unload a vehicle. The penalty applies both to the movement of the soldiers being loaded or unloaded and to the movement of the vehicles that turn. In effect, this means that only soldiers within 3" of a vehicle will be able to load into it, and that the vehicle can move only 9" that turn. Likewise, on the turn in which the vehicle unloads, it can move only 9" and the offloaded soldiers will be able to move only 3".

The penalty for moving out of contact with a dinosaur is calculated before the half-movement penalty for loading or unloading is applied. Thus, a truck (movement 18") in contact with a dinosaur could move only 6" away to unload its passengers ($18 - 6 = 12$, $12 \div 2 = 6$), who would each have another 2" of movement ($6 - 2 = 4$, $4 \div 2 = 2$).

Unless the optional rule for moving fire is being used, troops carried in or on a vehicle will not be able to fire until they are unloaded.

VEHICLE PERSONNEL CASUALTIES

If a vehicle is destroyed, there is a chance that its driver, crew, and passengers are killed. The army player should roll 2d6 for every individual in or on the vehicle at the time it is destroyed. A roll of 7 or less indicates survival; on a roll of 8 or more, the individual is killed. Special army figures are allowed their usual luck rolls if they fail this survival roll.

TOWING AND SETTING UP WEAPONS

A truck, half-track, or tank can tow light artillery or a recoilless rifle. Movement while towing is one-half normal. This movement penalty is cumulative with any other penalties. Thus, a truck towing a recoilless rifle and picking up passengers could move only $4\frac{1}{2}$ " that turn.

It takes a full turn to hitch or unhitch a weapon. After the weapon is unhitched, it will be ready for fire on the next turn. The vehicle can also transport the weapon's crew.

Once placed, heavy artillery remains in place for the duration of the game and cannot be moved. Its facing can be changed, however, without penalty.

The lighter crewed weapons, such as machine guns and mortars, take half a turn's movement to set up or dismantle. The minimum crew number listed is also the minimum number needed to move the weapon. If there is not enough movement left to pay the setup penalty, a weapon cannot be fired. Thus, if a heavy machine gun crew moved 4", they could not then set up their gun and fire in that turn.

RANGES

An army attack can succeed only if the dinosaur is within range of the particular weapon being used. If there is any debate on whether a dinosaur is within range, give the army the benefit of the doubt.

If a weapon has two ranges separated by a slash, the first range is for manual fire, and the second is for fire from a fixed position (a tripod, bipod, vehicle mount, and so forth).

Mortars have a special minimum range, since they are arced-fire weapons whose shells are lobbed at the enemy. A mortar must have at least 18" of range to fire effectively, but will not be able attack beyond 60".

LINE OF SIGHT

A direct-fire weapon has a single attack score and must have line of sight to be able to fire. If a soldier can't see a dinosaur, that dinosaur can't be attacked. Line of sight can be blocked by unusual terrain, vehicles, or other dinosaurs. If there is any disagreement about line of sight, give the army the benefit of the doubt.

INDIRECT FIRE

Weapons that have two attack scores divided by a slash (including mortars and artillery) are allowed indirect fire. Individuals using such weapons can shoot at a target they cannot see as long as some soldier who can see the dinosaur acts as a spotter. Any individual can act as a spotter for indirect artillery fire. It is easiest to assume that all figures and vehicles in the army are in radio contact with each other. A spotter who calls down fire can shoot a personal weapon only once that turn. Remember to use the second (lesser) attack score for indirect fire only; the first score is for direct fire.

THE RAMBO RULE

A hero (and only a hero) can pick up a light machine gun and fire it manually. This is the one instance where this

weapon can be fired without its full crew for more than just one turn. Roll 1d6 to see how many turns' worth of ammunition are already loaded into the light machine gun when the hero picks it up to fire. Use the unfixed range (24") for the weapon.

SCALE

The movement rates and ranges given are for 1:32 (54 mm) scale (1:35 scale is essentially the same). This is the usual scale for toy plastic soldiers, and many rubber dinosaurs and plastic model kits are on the market in that scale. The same scale is appropriate for some "action figure" toys.

A second, equally useful scale is 1:76 or 1:72 — the approximate scale that many plastic dinosaurs come in. Extensive figure and vehicle model lines come in this smaller scale, which would be applicable for human figures as small as 15 mm and as large as 25 mm. If the smaller scale is used, reduce all movement rates and ranges (including any movement penalties) by half. Thus, a tyrannosaurus would move 9" and spend 1" for an overrun.

There is no need to be fanatical about scale. The idea is to have fun without spending a lot of money on figures. Use what you can get. Reasonably faithful scale figures simply look better, such that a tyrannosaurus appears a lot more frightening if it stands four times the height of a soldier. Scales can even be mixed if necessary, using larger soldiers but smaller dinosaurs (since both are often available in cheap plastic bags at toy stores, drug stores, hobby stores, and so forth). Figures of different scales can also be combined. In particular, smaller dinosaurs can be used with larger ones as young dinosaurs, having fewer life points and doing less damage.

The larger scale is best played on a large floor or in a yard. The smaller scale can be played on a large table. If space is a problem, lower the movement rates and ranges accordingly. Dividing these values by three or even four will allow play on an average-sized kitchen table. As long as the proportion is kept the same throughout, the rules will play well.

OPTIONAL RULES

All optional rules have been rated, showing which side they are likely to favor and how strong the change will probably be. Letters are used to denote which side is favored. "A" means the rule favors the army; "D" means the rule favors the dinosaurs; "N" means the rule favors neither side. Rules that favor one side or the other are also rated from 1 to 5, with 1 meaning the rule only slightly favors that particular side, while 5 means the rule highly favors that side. The ratings were included to help players adjust the play balance when deciding which optional rules to use.

Terrain Penalties (D1). A bit of terrain can spruce up any battlefield, be it the kitchen table or the backyard. Model trees, potted plants, Styrofoam hills, gravel from the driveway, vacuform terrain, tree branches—use whatever works.

For simplicity, all terrain except the playing surface (table, floor, or ground) is considered "unusual" and has

a penalty when moved through. The movement penalty is 2" for soldiers and dinosaurs, and 6" for vehicles. The penalty applies if a figure moves through that terrain during any part of the turn. The penalty is paid only once per turn, no matter how many types of unusual terrain are moved through. Thus, a tank moving down a hill, across broken ground, and into the woods still has only a 6" movement penalty.

When calculating movement penalties, always take subtractive penalties first, then calculate divisive penalties. For example, a tank moving out of contact with a dinosaur, over a hill, and unloading passengers could move only 3" that turn ($18 - 6 - 6 = 6$; $6 \div 2 = 3$).

If subtractive penalties reduce a figure's movement to zero, the figure is trying to do too much that turn and must choose between the various options.

Cover (N). Smaller dinosaurs (coelophysis, deinonychus, and so forth) in appropriate terrain (broken, woods, ruins, and such) are considered to have cover, and a -1 is applied to a weapon's attack score for attacks against them. Most dinosaurs are too big for cover to be a factor.

If buildings are being used, soldiers inside a building impose -1 to a dinosaur's attack score only on the first turn any particular dinosaur attacks the building. Thus, the first time a tyrannosaurus attacks soldiers inside a building, it succeeds only on a 9 or less. After the first attack, the tyrannosaurus hits normally. Smaller dinosaurs are considered to have broken into the building, and larger ones to have broken down the building.

Dive Move (D2). Flying dinosaurs gain a special dive move when swooping down on their prey. The move is measured directly on the diagonal instead of using the horizontal-vertical method. It thus shortens movement into an attack. Such a move is really appropriate only when the dinosaur is diving to attack, not when it is climbing for altitude.

Minimum Altitude (A2). Each time a flying dinosaur takes to the air, it must move at least 6" upward. If the dinosaur does not attain at least 6" of altitude, its movement in that turn is limited to half normal.

Dino Rage (D5). A dinosaur does not die when reduced to 0 LP. Instead, like a special army figure, it gets a luck roll. It can then continue to fight on as long as it keeps making a luck roll after every successful attack by the army side. The dinosaur luck roll depends on its attack score, as indicated on the following table.

Attack Score	Luck Roll
8	6
9	7
10	8

Ramming Move (A3). Normally, vehicles attack only with whatever weapons are mounted on them. As an option, allow a vehicle to make a ramming attack against a dinosaur. If the vehicle has enough movement, the ramming attack succeeds on a roll of 10 or less on 2d6. On a roll of 11 or 12, the dinosaur evades the ramming vehicle. Whether the attack succeeds or not, a vehicle that chooses to ram a dinosaur wrecks its suspension and is immobile for the rest of the game.

The army player can still fire the vehicle's weapons, if appropriate.

If the ramming attack succeeds, the vehicle does life point damage equal to its structural points. Thus, a jeep would do 3 LP on a ramming attack, while a tank would do 15 LP.

Moving Fire (A4). Troops carried in or on vehicles do not normally fire until they are offloaded. If this optional rule is used, allow half of the carried troops to fire while the vehicle is in motion (round numbers up). Firing while in or on a vehicle imposes a -2 penalty to a weapon's attack score. Thus, a soldier armed with a rifle would need to roll 5 or less on the attack while in the back of a truck.

High-Caliber Ammo (A1). The Army Weapons table assumes standard ammunition for weapons. Rifles and pistols can come in varieties using high-caliber bullets with more stopping power than standard ammunition. If high-caliber ammunition is used, a weapon's damage is increased to 2 LP but its attack score is lowered by 1. Thus, a .44 magnum revolver would do 2 LP damage and have an attack score of 6.

Snipers (A3). One soldier per ten enlisted soldiers can be designated a sniper. A sniper increases the range of a rifle or assault rifle by 6" and increases the weapon's attack score by 1. A sniper could also be an NCO or hero (but not a leader), increasing the weapon's attack score by a total of 2.

Limited Grenades (D3). In the regular rules, the army player does not keep track of how many grenades each soldier throws. Any soldier who can move into position to throw a grenade can do so. Optionally, each regular soldier carries only one hand grenade, though NCOs, leaders, and heroes still have unlimited supplies of grenades.

Fire into Combat (D4). In the regular rules, soldiers can fire at dinosaurs even if the dinosaur is currently fighting (that is, in contact with) another soldier or a vehicle, without risk of hurting the friendly soldier or vehicle. As an optional rule, if an army figure fires into an ongoing combat, a friendly figure or vehicle might be hit by accident.

If the attack hits the dinosaur, there is no problem. If the attack misses, it might hit the figure or vehicle the dinosaur was fighting. Roll 2d6; on a roll of 10 or higher, the attack hits the friendly figure or vehicle. Roll for each appropriate miss. Multiple damage applies if the target is a vehicle.

Special Forces (A4). The army player can have one small unit consisting entirely of heroes. This elite unit should be no larger than 20 percent of the total army size. The unit represents one of the special forces of the world's armies (Green Berets, SAS, Rangers, Spetsnaz, commandos, paratroopers, and so forth).

Wounded Soldiers (D3). Any special army figure that is hit by a dinosaur but succeeds on a luck roll is wounded. The figure's modification to a weapon's attack score is lost for the rest of the game (including a sniper modification, if applicable). If this rule is used, it will be necessary to keep track of wounded figures in the same way a player keeps track of wounded dinosaurs and damaged vehicles.

Paratroopers (A3). One small unit, no larger than 20 percent of the army, can be designated as paratroopers.

This unit's setup is handled differently than other army units. To simulate a paratroop, the army player makes a paper airplane and launches it from one edge of the playing surface (player's choice of which edge). Within 2" of wherever the paper airplane lands is where the paratroopers set up. If the airplane flies completely beyond the playing surface, allow the player to try again on the next turn, until the plane eventually lands inside the playing surface.

Dino Charge (D2). On the first time a dinosaur attacks (and only then), give it an additional 2" of movement to simulate an enraged charge. This bonus might allow an additional overrun attack.

If all of the optional rules are used, the advantages in point values are equal for both sides.

PLAY BALANCE

The following point system offers a way to balance both sides in the game. First, total up the points for the army. The dinosaur side should have approximately twice as many points as the army in order for the battle to be fair.

A basic army soldier is worth 2 points. An NCO is worth 3 points, a leader is worth 4, and a hero is worth 5. A vehicle's point cost equals its structural points plus additional points for its crew (as per regular soldier values), with an additional 1 point for a mounted machine gun and 2 points for a mounted cannon. Each crewed weapon is worth a number of points equal to one less than the minimum crew size required.

The point cost system allows players to design vehicles and army groups. For simplicity, some average vehicle point costs and crewed weapon modifiers are given below. The first point value is for an unarmed vehicle; the second is for an armed one.

Vehicle	Points
Motorcycle	2/4
Jeep	4/6
Truck	5/7
Half-track	6/10
Armored car	7/11
APC	7/9
Tank	—/22

Each dinosaur has a point cost equal to its life points. A +1 modifier is added if the dinosaur moves faster than 24".

Example. One player controls an army group of twenty-two soldiers, including two NCOs, one leader, and one hero. The group has a heavy machine gun and a mortar. Attached to the group is one tank (with a tank gun and machine gun) plus an unarmed truck. The point size for the group would therefore be 80 points (44 soldier points + 7 point for special figures + 2 points for special weapons + 22 points for the tank + 5 points for the truck).

Battling the army group are two tyrannosaurs (30 points), two triceratops (30 points), an apatosaurus (24 points), two dimetrodons (12 points), two plateosaurs (14 points), two stegosaurus (20 points), three pterodactyls (6 points), and two ankylosaurus (24 points). The dinosaur side totals 160 points.

GAME SETUP

There are two kinds of setup: random and deliberate. In either case, dinosaurs cannot be set up closer than 24" (preferably 36") to any army soldier or vehicle. Two setup examples are given below. "Dino Island" is a random setup. "Time Gate" is a deliberate setup.

DINO ISLAND

The playing area simulates an island. The playing surface is about 200 square feet in size (12 feet by 15 feet will work). Neither side can leave the island at any time. Take twelve chits or scraps of paper, numbered 1 to 12. Distribute them across the playing area in twelve different locations, separated by at least 24" if the chits are placed on the most prominent landmarks or by 36" if spaced evenly in a 3-by-4 grid.

Each side has three players. Each player on the army team has an army group of 50 to 100 points, and each dinosaur player has one-third of the dinosaurs. Setup is random. Using a set of twelve duplicate chits, have each player draw one chit to determine where to set up. The first figure a player places must go on the spot marked. The player's other figures are placed near the first one in any order desired, but no farther than 12" away from the marked spot. Alternatively, a dinosaur player places one figure first, then an army player puts down one figure, and this alternating setup continues until all six players are set up.

The battle is a fight to the death. Once one side has been completely wiped out, the game ends.

Variations. A fourth army player can control all the tanks; the dinosaur total is then divided into four teams too. Point values, playing areas, number of players, and setup spaces can all be varied as well.

TIME GATE

The premise of this scenario is that the army force has become lost in time. The only way back to its own time is through a special gate. The gate sets up a field between two poles, spaced scale inches apart. Unfortunately, the army has only one of the poles. The other is hidden somewhere in dinosaur territory. The army must invade the land of the dinosaurs and search until the second pole is found. The poles can then be set up so the soldiers can go home.

It helps to have a neutral referee to place the second pole in a reasonable spot and oversee hidden movement. Dinosaurs can hide behind unusual terrain and will thus not be spotted until an army player comes within 18" of them. Hidden dinosaurs are not placed until spotted. Both sides can divide their total forces any way they wish (thus the army can form recon squads). The setup area can vary as circumstances dictate, as long as there is ample room for movement. Two soldiers can carry the gate pole, or it can be loaded into a vehicle (it takes up the space of one soldier).

The game ends when the army escapes back to its own time, or when the dinosaurs wipe out all the army figures.

Variation. The army begins the game entirely mechanized. To compensate, add several areas of impassable terrain (deep swamps, high mountains, and so on).

DINOSAUR DESCRIPTIONS

Dinosaurs and the other unusual reptiles used in this game are detailed in the following section, with notes on their sizes, diets, and the geologic period in which they were found. The Permian period lasted from 286 to 248 million years ago, and came just before the three great ages of dinosaurs in the Mesozoic era. The dinosaur ages were the Triassic (248 to 213 million years ago), the Jurassic (213 to 144 million years ago), and the Cretaceous (144 to 65 million years ago).

Allosaurus. 40 feet long, 15 feet tall, 3 tons; carnivore; Jurassic. The most dangerous predator of its time, allosaurus had clawed forelimbs and hind legs for pinning down its prey, and a huge mouth for ripping flesh.

Anatosaurus. 30 feet long, 13 feet tall, 4 tons; herbivore; Cretaceous. This was the classic duck-billed dinosaur, so named for its long, low skull that resembles a duck's bill and its webbed, three-toed feet. Similar duckbills grew as large as 43 feet long and 5 tons.

Ankylosaurus. 35 feet long, 6 tons; herbivore; Cretaceous. This creature's body was completely protected by a shell-like mass of bony plates. Its tail, ending in a heavy club, could be swung at enemies with fatal results.

Apatosaurus. 70 feet long, 14½ feet at shoulder, 33 tons; herbivore; Jurassic. This monster's prime defenses were its long, whiplike tail and its ability to rear up on its hind legs and bring its great weight crashing down on an enemy.

Brachiosaurus. 75 feet long, 21 feet at shoulder, 89 tons; herbivore; Jurassic. One of the most massive, though not longest, animals ever to walk the Earth, Brachiosaurus had a long neck and served the same ecological function as a giraffe, browsing off treetops.

Ceratopsaurus. 20 feet long, 8 feet tall, 1 ton; carnivore; Jurassic. This swift, savage carnosaur had a bony ridge above each eye and a hornlike growth above its nose. Fossil footprints suggest it may have hunted in packs.

Coelophysis. 10 feet long, 5½ feet tall, 65 pounds; carnivore; Triassic. This light, agile creature had hollow bones and could run swiftly on its birdlike legs. It may have hunted in packs and been cannibalistic.

Deinonychus. 13 feet long, 7 feet tall, 300 pounds; carnivore; Cretaceous. Deinonychus had a comparatively large brain and probably hunted in packs. Its second toe bore a sickle-shaped claw nearly 6 inches long that could be raised up and back when running.

Deinocheirus. 40 feet long, 20 feet tall; 2 tons; carnivore; Cretaceous. Known only from a pair of 8½-foot-long arms (each ending in claws 8 inches long), this could represent a type of large, fast dinosaur that primarily used its claws instead of its teeth to hunt.

Deinosuchus. 50 feet long, 9 tons; carnivore; Cretaceous. The largest known crocodile, this was not a dinosaur but would have been contemporary with them.

Dimetrodon. 13 feet long, 1 ton; carnivore; Permian. The dimetrodon was not actually a dinosaur, but a reptile that lived some 50 million years before dinosaurs evolved. It is characterized by its spiny sail back, which probably served to control its body temperature.

Diplodocus. 90 feet long, 16 tons; herbivore; Jurassic. With its tremendous snaky neck and long whiplike tail, this dinosaur was among the longest to walk the land.

Dolichosuchus. 18 feet long, 10 feet tall, 350 pounds; carnivore; Triassic. This dinosaur was similar to coelophysids, only larger.

Dryptosaurus. 22 feet long, 8 feet tall, 500 pounds; carnivore; Cretaceous. Dryptosaurus had huge back legs that might have been used to leap upon prey.

Gallimimus. 13 feet long, 7 feet tall, 250 pounds; omnivore; Cretaceous. Gallimimus was the largest known ostrich-like dinosaur.

Hylaeosaurus. 20 feet long, 3 tons; herbivore; Cretaceous. Hylaeosaurus was the third dinosaur discovered (1832). It had a series of large, hard, symmetrical plates growing down its head and back, plus protective spikes growing out of its sides and up its tail.

Iguanodon. 30 feet long, 16½' tall, 6 tons; herbivore; Cretaceous. The second dinosaur discovered (1822), this bipedal dinosaur was strong and bulky, with curious spiked thumbs.

Megalosaurus. 30 feet long, 12 feet tall, 1½ tons; carnivore; Jurassic and Cretaceous. The first dinosaur discovered (1677) and named (1824), megalosaurus was a typical carnosaur with a bulky neck, large jaws, large hind legs, shorter forelegs, and a long tail.

Monoclonius. 20 feet long, 3 tons; herbivore; Cretaceous. Monoclonius had a short, scalloped bone frill. Above each eye was a small horn, and above its snout was an extremely long horn, like that of a rhinoceros.

Pachycephalosaurus. 15 feet long, 8 feet tall, 800 pounds; herbivore; Cretaceous. The classic "bone-headed" dinosaur, this one's brain was encased in a solid dome of bone 10 inches thick. It could have used head-butting as a defense and as a mating ritual.

Paleoscincus. 23 feet long, 4 tons; herbivore, Cretaceous. Paleoscincus had solid armor plates on its back, and spines on its flank and tail.

Parasaurolophus. 33 feet long, 23 feet tall, 5 tons; herbivore; Cretaceous. This dinosaur is noted for its crest in the shape of a great tube extending from the back of its skull.

Plateosaurus. 26 feet long, 2 tons; omnivore; Triassic. A mostly bipedal dinosaur that sometimes went on all fours, this was a possible ancestor of the later herbivorous giants like apatosaurus and diplodocus.

Pterodactyl. 13-foot wingspan; 15 pounds; piscivore (fish-eater); Jurassic. This flying reptile was not actually a dinosaur. Elongated arm and hand bones supported its wings.

Pteranodon. 23-foot wingspan, 40 pounds; piscivore; Cretaceous. Another flying reptile that was not actually a dinosaur, pteranodon's elongated crest behind its head probably acted as a stabilizer in flight.

Quetzalcoatlus. 39-foot wingspan, 150 pounds; piscivore; Cretaceous. A flying reptile (not a dinosaur) known from only fragmentary remains, it might have been the largest flying creature of all time.

Saltasaurus. 40 feet long, 8 tons; herbivore; Cretaceous. Saltasaurus had thousands of small bony

studs and plates guarding its broad back and sides, but otherwise it looked like a small apatosaurus.

Spinosaurus. 40 feet long, 7 tons; carnivore; Cretaceous. Spinosaurus had a sail on its back that extended up to 5 feet in height.

Stegosaurus. 30 feet long, 4 tons; herbivore; Jurassic. Stegosaurus is noted for the two rows of alternating triangular plates running along its back. Its real defense was its tail spikes. It had an enlargement of the spinal cord above its hind legs that may have acted like a second brain to control the movement of its legs and tail.

Stenonychosaurus. 6½ feet long, 80 pounds; omnivore; Cretaceous. An agile rapid runner roughly the size of a human (though lighter), it had probably the largest brain-to-body ratio of any dinosaur.

Styracosaurus. 18 feet long, 2½ tons; herbivore; Cretaceous. This dinosaur had a short, bony frill endowed with a number of long, backward-pointing spikes. It had a single long horn growing from its nose.

Therizinosaurus. 35 feet long, 18 feet tall, 1½ tons; carnivore; Cretaceous. Known from only a single arm that was more than 8 feet long, this carnosaur had claws nearly 1 foot long. Like Deinocheirus, it could represent a type of fast dinosaur that hunted primarily with its claws instead of its jaws.

Torosaurus. 25 feet long, 6 tons; herbivore; Cretaceous. Torosaurus resembled triceratops, but had a much larger frill-crest (reaching almost halfway down its back).

Triceratops. 30 feet long, 9 tons; herbivore; Cretaceous. This fierce-looking dinosaur had a short, solid frill and three horns: two long ones (up to 3 feet long) over its eyes, and one short horn over its snout.

Tyrannosaurus. 50 feet long, 20 feet tall, 8 tons; carnivore; Cretaceous. Tyrannosaurus might have been the most powerful carnivore to ever walk this planet. It had a huge head with dagger-like teeth 6 inches long, massive hind legs, a long tail, and ridiculously short forearms.

CREDITS

Design: Tom Moldvay

Development: Tom Moldvay, Lawrence Schick

Playtesters: Richard E. Barr, Kevin Boardman, Charlene Britton, Dave Bullis, Harvey Carberry, Ryan Cope, Tom Cummings, Eric N. Davis, Jeff Dee, Patrick Dougherty, Keith Evans, Brandon George, Tom Hanlon, Jeff Leason, Erol Otus, Lawrence Schick, Marshall Simpson, Steve Sullivan, Charles Wall, Bill Wilkerson, Bill Willingham

Photography: Larry W. Smith

Special Thanks To: John Michael Moore (who let us use his dinosaurs), Mickey Zucker and all of John's relatives (who gave John those dinosaurs), and Dale A. Donovan (who bought the army soldiers)

Layout and Updating for *Dragon+*: Scott Fitzgerald Gray

©2017 Wizards of the Coast LLC, PO Box 707, Renton, WA 98057-0707, USA. Manufactured by Hasbro SA, Rue Emile-Boéchat 31, 2800 Delémont, CH. Represented by Hasbro Europe, 4 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, UK

DINOSAUR STATISTICS

Dinosaur	Life Points	Movement	Attack Score	Damage	Armor
Allosaurus	10	18"	10	3*	—
Anatosaurus	10	18"	8	2*	—
Ankylosaurus	12	12"	9	2*	2
Apatosaurus	24	12"	8	2**	—
Brachiosaurus	32	12"	8	2**	—
Ceratosaurus	7	18"	9	2*	—
Coelophysis	1	24"	9	1	—
Deinocoelurus	9	24"	10	1	—
Deinonychus	3	24"	10	1	—
Deinosuchus	15	12"/24" ¹	9	3**	1
Dimetrodon	6	18"	9	2	—
Diplodocus	20	12"	8	2**	—
Dolichosuchus	4	24"	10	2	—
Dryosaurus	6	18"	10	2	—
Gallimimus	3	24"	10	1*	—
Hylaeosaurus	10	12"	9	2*	2
Iguanodon	12	18"	8	2*	—
Megalosaurus	8	18"	10	2*	—
Monoclonius	9	18"	9	3*	1/—
Pachycephalosaurus	5	24"	9	2*	—
Paleoscincus	10	12"	9	2*	2
Parasaurolophus	11	18"	8	2*	—
Plateosaurus	8	18"	8	2	—
Pterodactyl	1	36"	9	1	—
Pteranodon	2	36"	9	1	—
Quetzalcoatlus	3	36"	9	1*	—
Saltasaurus	14	12"	8	2*	1
Spinosaurus	14	18"	10	3*	—
Stegosaurus	11	18"	9	2*	1
Stenonychosaurus	1	24"	10	1	—
Styracosaurus	9	18"	9	3*	1/—
Therizinosaurus	7	24"	10	3*	—
Torosaurus	12	18"	9	3**	1/—
Triceratops	14	18"	9	3**	1/—
Tyrannosaurus	15	18"	10	3**	—

1. Movement rate of 24" across water only.

* Automatically destroys any non-tank vehicle on a 2.

** Destroys any non-tank vehicle on 2-3; destroys a tank on a 2.

DINOSAUR MOVEMENT MODIFIERS

Situation	Modifier
Overrun	-2
Unusual terrain (optional)	-2
Charge (optional)	+2*

* First turn of attacking only



ARMY WEAPONS

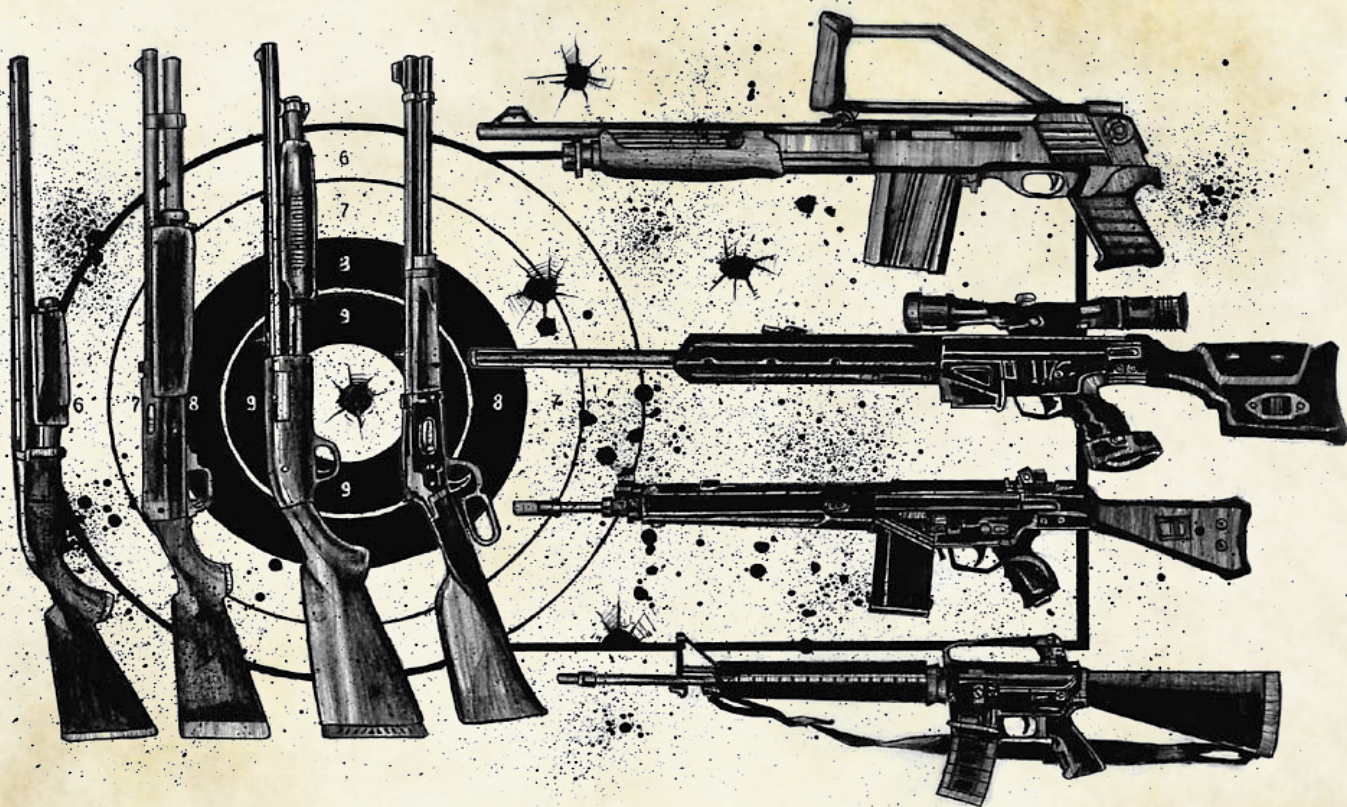
Weapon	Range	Damage	Attack Score	Minimum Crew
Rifle ¹	18"	1	7	—
Assault rifle ¹	12"	2	8	—
Submachine gun ¹	6"	2	8	—
Pistol ¹	6"	1	7	—
Grenade	3"	3*	8	—
Flamethrower	6"	3	6	—
Automatic rifle ¹	18"/24"	2	8	—
Bazooka/rocket	12"	3*	6	—
Light machine gun ¹	24"/36"	2	9	2
Heavy machine gun ¹	48"	2	9	2
Recoilless rifle	24"	3*	7	2
Mortar	18"–60"	3*	7/6	2
Light artillery/tank gun	60"	3*	9/7	3
Heavy artillery	72"	3*	9/7	4

1. Can make two attacks per turn.

* Automatic kill on an attack roll of 2.

ARMY ATTACK MODIFIERS

Modifier	Factor
+1	Hero/leader/NCO
+1	Snipers (optional)
-X	X = any dinosaur armor
-1	Cover (optional)
-1	Higher-caliber ammo (optional)
-2	Moving fire (optional)



ARMY VEHICLES

Vehicle	Structural Points	Carry Capacity	Crew
Motorcycle	1	1	1(2)
Jeep	3	3	1(2)
Truck	4	8	1(2)
Half-track	5	4	1-3
Armored car	6	3	1-3
APC (armored personnel carrier)	6	6	1(2)
Tank	15	4	4

ARMY MOVEMENT MODIFIERS

Condition	Soldiers	Vehicles
Base rate	6"	18"
Escape from dinosaur	-2"	-2"
Load/unload vehicle	× 1/2	× 1/2
Set up/dismantle weapon	× 1/2	—
Towing artillery	—	× 1/2
Unusual terrain (optional)	-2"	-6"