

# INVASION: AMERICA

by Phil Kosnett

The SPI simulation *Invasion: America* postulates a conventional invasion of North America at the end of the 20th Century. Such would be the first invasion of North America by outside powers since 1815. An invader would have to take into account not only the defending armies, but the geography of the continent. Just where—and how—would such an invasion take place?

## GROUND FORCES, A.D. 2000

The *Invasion: America* "world" postulates that cheap, easily replaceable weapons systems have proven superior to sophisticated, hard-to-replace systems (i.e., the Sino-Soviet approach has proven superior to the U.S. approach). Cheap systems allow for the maintenance of large armies, necessary for the defense or conquest of an area the size of North America. In all likelihood, the ground forces would not be all that different from today's less sophisticated armies. Consider:

In the more than three decades since World War II, tank design has advanced very little.

Tanks still have one turret with one cannon, a track-laying movement system, and a diesel engine. The only real advances have been in optics and armor. Missile armament for tanks has not proven superior to the traditional gun armament (as witnessed by the U.S. Army's problems with the M60A2). Twenty-five years from now, tanks will not be very different. Optics such as laser rangefinders will make tank battles faster and deadlier. Increased gunpower will be balanced by advances in light, strong composite-metal armor. Quite probably, tanks will be much lighter than they are today, for two reasons. First, it is more productive to deliver two 25-ton tanks than one 50-ton tank; weaponry has already grown so powerful that increased armor doesn't help much. Second, the continuing shortage of fossil fuels will force even the military to think about gas mileage. (And there is no alternative to fossil fuels; motor vehicles cannot really operate on electric power.)

Anti-tank warfare is another matter. More than any other branch of the ground forces,

anti-tank missiles, cheap and powerful, have been designed with kill ratios in excess of 75%. That will improve. The effect of large quantities of these missiles will be able to render tank charges suicidal. (Experience from the Yom Kippur and Angolan Wars proves this.) Tanks will not be used as much to crack defensive lines. Tanks will be used more in their other traditional role, that of exploiting breakthroughs.

The logical result of the loss of effectiveness of tanks (and, by extension, mechanized infantry) will be an increase in the importance of leg infantry. Wire-guided missiles are ineffective against individual infantrymen.

Infantry will not fight in the World War I manner, charging unsupported against machine gun positions. Instead, leg infantry will help clear the way for light tanks and mechanized infantry carriers to break through the defense. By neutralizing the defenders' missile screen, infantry will clear the way for the heavy firepower and shock effect of armor.



Economically, leg infantry has much going for it. Mass-produced small arms cost very little. With a projected A.D. 2000 population of eight billion worldwide, there will certainly be no shortage of people.

A mechanized force in 2000 will not consist solely of tracked vehicles. Trucks will be sufficient to carry the leg infantry contingent, for trucks are much cheaper and more reliable than armored personnel carriers. Given an area with as extensive a road net as North America, the cross-country speed advantage of tracked carriers is reduced in importance.

Pure infantry units will make up a much larger proportion of the armies than is the case today. Infantry is much cheaper and easier to replace than mechanized units. Naturally, infantry lacks the firepower and mobility of armor. Therefore, infantry will not be able to maintain strong offensives in the face of resistance. The role of large infantry formations will still be secondary; assisting armored units in attacks,

defending the flanks of armored advances, and making diversionary or supportive attacks.

Artillery hasn't really changed radically since before World War I. The only foreseeable improvements in artillery are increased accuracy (aided by laser designators, which guide artillery directly to the target), increased range due to greater use of rocket-assisted shells, and an increase in mobility because of more widespread use of self-propelled guns. Smaller guns and mortars will be able to put out firepower equivalent to large howitzers in use today.

So far, it seems that very little dramatic progress is foreseen in conventional ground forces. What of the esoteric weaponry that think-tanks and science fiction writers talk about? Robot tanks, hovercraft, subterranean mole-tanks, infantry with jet backpacks, laser weapons? Most of these are simply impossible to project for 2000. While most are technologically possible (and all but the moles are either operational or experimental today) they are all very expensive and difficult to replace. A machinegun can do as much damage to a human being as a laser rifle, for only a tiny fraction of the cost. Jet backpacks (*a la James Bond*) would increase infantry mobility, but they would be far too fragile for prolonged maintenance in the field. Besides, they would require huge quantities of fuel. And no robot brain could fight as efficiently as a tank crew; again, people are cheaper.

One of these esoteric weapons has promise: the hovercraft. The hovercraft is very fast and its ability to operate over water makes it invaluable for amphibious operations. While hovercraft today are very lightly armed, more powerful engines would allow hovercraft to be built with more armor and heavier weapons. Small quantities of hovercraft could be built without straining the combatants' economies, and they would return much. In the vast wastes of northern Canada, hovercraft would run rings around wheeled or tracked vehicles. North America's many rivers would have their defensive effectiveness reduced if attacking forces had hovercraft to quickly get across. The major drawbacks to hovercraft are their inability to move through mountainous terrain or city streets, their high rate of fuel consumption, and their weakness in combat; if a tank and a hovercraft had a shoot-out, the tank would have a much better chance of survival.

It is important to keep in mind the nationality of the forces being discussed. So far, the information applies to conventional forces as used by the Soviets and the West. The nations of South America have little combat experience, but their weapons have evolved along the Western model. The countries of the Far East have had a different military history. Unlike the Soviets and U.S., the Chinese do not today have a mechanized army. Their strength is in their leg infantry. It seems likely that the Chinese (and Vietnamese, Cambodians, *et al*) will use in 2000 the same tactics they always have—massed infantry attacks. Indeed, it's ironic that the "primitive" Chinese Army may have saved itself considerable effort by not mechanizing; tanks are now too vulnerable to be used with impunity. This should not be considered to mean that Asian nations cannot use mechanized forces effectively; North Vietnam's 1975 combined infantry-armor blitzkrieg should disprove that idea.

Whenever a country has time to prepare for invasion, it mobilizes the militia. The United States could raise very large militia contingents, having large quantities of people and non-military weapons. There are also millions of non-military vehicles. While the sight of irregulars with hunting rifles driving passenger cars and school busses to battle may seem incongruous, it would be a waste of resources not to use militia. Naturally, some heavier weapons (obsolete artillery and anti-tank guns, old machineguns, light armor) would be given to the civilians for stiffening. The fighting abilities of the militia would probably leave much to be desired, but they would be better than nothing. At the very least, the wreckage of their vehicles would slow the enemy advance.

#### AIR FORCES, A.D. 2000

*Invasion: America* postulates that helicopter forces are no longer in use. Besides their expense and sophistication, their weakness when faced with armor or heavy anti-aircraft fire has swept airmobile forces from the battlefield.

Airplanes will not change much between now and 2000. Building faster planes would sacrifice maneuverability, and building more maneuverable planes would only marginally improve their chances of survival. Aircraft weaponry—missiles, cannon, smart bombs—will improve, and ground support aircraft will be able to exert more influence on the ground battle—if either side can take control of the air, that is.

The air battle will be more complex than ever before. Directed by airborne command posts, hundreds of fighters would attempt to wipe each other from the skies. It would be an electronic war, with electronic warfare planes "painting" enemy aircraft with laser beams. Thus guided, friendly fighters would unleash air-to-air missiles at long distances and high altitudes. Enemy electronic planes would try to jam the laser designators, while the electronic counter-measures built into each aircraft would further confuse things. Surface-to-air missiles would join in against low-flying planes. Only if total control of the air was achieved by the sophisticated long-range fighters would the ground support planes go into action. Cheap and expendable, subsonic fighter-bombers would use smart bombs and air-to-surface missiles to attack enemy ground forces. A hail of SAM's would soon cause enormous attrition among these support planes. The defending forces would send bombers against the invasion fleets lying offshore. At least that seems likely.

#### NAVAL FORCES, A.D. 2000

The U.S. Navy does not exist. If it did, there would be no invasion. The invasion fleets consist of transports, amphibious ships, aircraft carriers and fire support ships. With the exception of the carriers, these ships would be little changed from the invasion fleets of World War II. It is difficult to imagine any great leap forward in the construction of freighters and landing craft (hovercraft having already been discussed). As for the carriers, the trend today is for bigger ships with more planes. Such ships are also bigger targets, so it's possible that large numbers of minicarriers reminiscent of World War II's escort carriers will be built. (The U.S. is discussing "Sea control ships" and the U.K. "through-deck cruisers" which would be in this category.)

### Course of the Game

*Invasion: America* is a corps-level game of an invasion of North America by European, Asian and South American forces. The scale is one month per Game-Turn, 130 kilometers per hex. The basic scenario covers the invasions and their aftermath; others cover inland campaigns and partisan warfare. Victory is judged by control of cities and areas of mineral, petroleum and agricultural wealth.

The game employs a double-phased movement system. Only armor and mechanized units may move in the second phase. All nationalities have armor, mechanized infantry and leg infantry units; the defenders also have militia and the attackers, hovercraft, which can move across water and tundra quickly, but may not enter cities or mountain areas. Armor and mechanized infantry may move through Zones of Control at the rate of one hex per Movement Phase. Zones of Control are non-locking; units may freely exit and are not obligated to attack.

Air units are either Long Range Bombers or Close Air Support units. LRB's fight to gain air superiority, necessary for LRB's and CAS's to attack ground units. Naval units are Aircraft Carriers (essentially LRB's), transports (which carry land and air units between ports), or amphibious units (which transport land units to, and assist in, invasions).

An unusual characteristic of the game system is the Untried Unit Strength rule. Before being committed, the strength of a land or air unit is known only approximately. It is revealed after the unit is first committed. This uncertainty can ruin a Player's plans. Also, some American and Canadian militia has a Strength of "zero" and are eliminated if committed. Furthermore, Friendly units stacked with zero-Strength militia are forced to retreat.

The game has two-Player and multi-Player versions.

The mechanics of the invasion will be identical to those used in World War II operations. Aircraft and gun-armed ships will deliver softening-up bombardments. Landing craft will transfer men and vehicles from ships to the beach. Mobile port facilities will be moved in to aid in the buildup of *materiel* for the breakout from the beachhead.

It is possible that the invaders would be stopped at the shore and thrown back into the sea. This has very rarely happened. The attacker's local advantages of heavy naval and air support, surprise and concentration make it difficult for the defender to react with sufficient speed. Once the land forces are securely ashore, the carriers will continue to support them while the amphibious ships return to be used elsewhere and the freighters and tankers shuttle from port to beachhead.

#### INTELLIGENCE DEVICES

If any of the combatants' economies can support a space program, spy satellites could be launched. Spy satellites *today* are so accurate they can sometimes observe the movement of *individual* vehicles on the ground hundreds of kilometers below! These would allow near-perfect intelligence as to enemy strength, if not always their intentions. Unfortunately, spy satellites can easily be neutralized from the ground. (Firing a pattern of buckshot in the satellite's orbit is sufficient; it will hit the shot at the speed of thousands of miles per hour.)

Even today, sensors exist which can detect individual movements thirty meters away. Sensors can be seeded by air camouflaged to resemble leaves, beer cans, or other innocent objects. Again, the potential intelligence advantage is enormous.

#### WHERE TO INVADE AMERICA

The coast of North America is long and convoluted. There are plenty of areas where the coastline is clear of obstacles (such as cliffs, glaciers and beachfront condominiums). The biggest problem facing the invaders is not whether or not they can successfully invade, but rather what beaches are most promising.

When examining a potential invasion site, the invaders must keep three things in mind. First, the terrain behind the beach must offer some defense for the beachhead while the invaders build-up their forces. Second, is the beachhead close enough to valuable objectives so a long fight over wilderness to reach those objectives can be avoided? Third, will the defender be able to counter-attack quickly, or is the beachhead sufficiently isolated from major troop concentrations to delay defender reaction? Getting ashore is one thing, but it is just as important to establish a permanent lodgement quickly.

Nova Scotia is very rough, undeveloped terrain with few good roads. The only stretch of invadable coast is at Yarmouth (hex 0649 on the *Invasion: America* map). This is a large port, so reinforcements and supplies could be brought over more easily than via the beach. The port of Halifax is within striking distance, three hundred kilometers away. Unfortunately, the poor road net and dense forests of Nova Scotia would hinder a quick advance and help the defenders. Defender reinforcements from New England could shift quickly to bottle up the invaders. Another beach at Chandler, Quebec (1048) is in a similar bind. And both sites are a thousand kilometers from the nearest objective of any value, Portland.

Maine has more to offer. Almost the entire coast north of Portland is invadable, and the many small harbors would aid in resupply. The Longfellow Mountains would restrict defender movement west of the beachhead, and would not keep the invaders from their main objective southward: the megalopolis, richest industrial complex in the world. The major drawback to a Maine invasion is that it is hard to defend; the defenders can launch a three-pronged attack from north, west and south that would be hard to stop.

Connecticut (0146) is a poor invasion site. It is very close to rich objectives (New York, Boston, Philadelphia); too close. That area is certain to be heavily defended, and street fighting there would be bloody and fruitless.

New Jersey is more promising. The peninsula is easy to defend from landward attack because of the Delaware River, and port facilities would be protected by the ubiquitous coastal sand pits. A beachhead in New Jersey is easier to hold than one in Connecticut, but just as hard to expand from. The Delaware and the heavily industrialized northern New Jersey cities tend to slow any breakout.

The Delaware peninsula has little to recommend it. It can be taken with relative ease, but once taken is almost worthless. The neck of the peninsula is barely twenty kilometers wide. An attempted breakout through this narrow stretch could be blocked very easily. If the invaders also held New Jersey, a shuttle could probably be established across Delaware Bay.

Southern South Carolina and Northern Georgia are invadable. The port of Savannah (hex 2943) is a large complex capable of supporting a beachhead. The beachhead itself has good and bad points. It is fairly isolated, so defending reinforcements would take a while to reach it from the Midwest and Northeast. Atlanta, Jacksonville and Norfolk are within striking distance. The disadvantages are threefold. First, the Southeast is very heavily forested and swampy, which would slow an advance. Second, there are many rivers which would help the defenders retreat slowly. Third, the Appalachian Range provides a solid barrier to a northern advance. The same features which delay defender reaction tend to hem the invaders in.

Florida is a beautiful invasion site. It is invadable along almost all of its eligible coastline; the Everglades in the south being the only exception. Any attempt by the defenders to hold the peninsula would be frustrated by the expedient of landing on both sides of the peninsula's neck, cutting off Southern Florida. The ports of Jacksonville, Miami and Tampa-St. Petersburg allow a massive, fast troop buildup. Florida's proximity to the invader base of Cuba allows Cuban-based aircraft to support operations without having to transfer to the mainland. From Florida, Atlanta, Birmingham and New Orleans are within striking distance.

West of Florida almost all of the Gulf Coast is invadable, all the way around the Gulf of Mexico to the Yucatan Peninsula. The best sites—those closest to objectives—are those beaches at the mouth of the Mississippi (2235, 2336), Galveston (2331), Mobile (2436), Pensacola (2437) and Corpus Christi (2129). The terrain beyond these beaches is wide open prairie, the best terrain for mechanized breakthroughs in North America. The petroleum

reserves and wheatfields of Texas and Oklahoma and the Great Plains, along with the urban areas of the Sunbelt can easily be reached. The multiplicity of beach areas is so great that the defenders cannot hold the line strongly; it is so long it has to give somewhere. The disadvantage is that there are no geographic barriers to guard the flanks of the advance, such as in New Jersey and Florida. A force advancing in Texas or Louisiana can be cut off if the flanks are not protected by friendly forces. Bringing in these forces takes time, despite the large port facilities on the Gulf Coast. And there are no major barriers to delay a defender counter-attack. So invading on the Gulf Coast is a calculated risk.

The Pacific Coast offers fewer cities. Central America's west coast has many beaches, but few large ports. The purpose of an invasion there would be to cut off defending troops fighting against an overland advance from Columbia. Further north, the beach at Nayarit State in Mexico is a promising site. While hemmed in by the Sierra Madre Occidentals to the east, an advance northward along the coast would threaten Phoenix, and Mexico City and oil wells lie to the south.

Most of the United States Pacific Coast is not invadable due to high cliffs and other obstructions. The areas around Los Angeles and San Francisco are exceptions. Both cities are valuable prizes with major port facilities nearby. The San Joaquin Valley is easy to take, and that's about it. The Sierra Nevadas, if adequately defended, can block any eastward movement. California invasions offer little chance of effective breakthroughs. A California invasion secures California—and little else.

An Oregon invasion is another matter. The area opposite the Willamette River is the only invadable area of the state. The Willamette would shield the beachhead from counter-attack in the early days, during the troop buildup. A push across the river would secure Portland. From there, a movement across the Columbia would take Tacoma and Seattle. An eastern attack would bypass the Sierra Nevadas and reach the Rockies more quickly than a California invasion. An attack directly down the coast would take San Francisco. Granted, Oregon is heavily forested and this would aid the defenders.

A Washington invasion is possible around Cape Flattery. The opportunities for breakout are similar to those in Oregon. There is no barrier to guard the beachhead during buildup, but the important port of Tacoma is closer; Vancouver is also easy to get to.

The Pacific Coast of Canada is not good invasion territory; it is much too rough. Most of Alaska, too, is not invadable; it is difficult to disembark onto a glacier. The only good stretch of coast is on the Kenai Peninsula (hex 2504). A few dozen kilometers eastward is Anchorage. The only other important objective in Alaska, the North Slope oil deposits, is unreachable. No truck, tank or hovercraft army could get from Anchorage to the oilfields in under three months, and that is an excessive effort for the relatively small oil deposits. An Alaska invasion would be only an afterthought.

Northern Canada is mostly wasteland. The road net is minimal and the tundra prohibits large-scale land operations except by hovercraft. The mineral deposits are largely untapped. There are also very few beaches.

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One is at Cape Churchill (hex 1530). From here, a slow advance down the Nelson River to Lake Winnipeg would threaten Winnipeg City. By the time the invading force reached the city, the defenders would have strongly reinforced the city. Hovercraft could reach Winnipeg sooner, but could probably not take the city alone.

The last beach is at Moosonee (1037), at the base of James Bay. This is farther south than Cape Churchill and closer to objectives: Montreal, Toronto, even Minneapolis. While it would be difficult to conquer the continent from a base at Moosonee, it would be a useful diversion.

#### HOW TO DEFEND AMERICA

The defenders could probably not hold at the beach, so they would have to fight inland. North America has many geographic barriers which would assist the defenders. Rivers, swamps and mountains, as well as cities, are useful in defense in the USA. Further north, the tundra of Alaska and Canada presents a major obstacle.

The Longfellow Mountains block movement from Maine to Montreal. The Connecticut River (between Vermont and New Hampshire) isolates Maine from the south. The St. Lawrence River is a major obstacle; holding a line from Lake Ontario through the St. Lawrence cuts off a major axis of advance.

Further south, the Appalachian Range stretches from New York to Alabama. These high mountains, if adequately defended, could stop any invader advancing from the East Coast to the Midwest. The Chatahoochee and the Alabama Rivers combine with the southern Appalachians to form a strong defensive line from Pensacola to Buffalo. A backup line for this mountain defense would be a line on the Mississippi from New Orleans to Memphis, then along the Ohio to Lake Erie.

Unfortunately, a defense based on either of these lines abandons the megalopolis, which can hardly be considered expendable. If forced set their defense in the megalopolis instead of the mountains, they would be able to fight hard block-to-block. Urban fighting is never a pleasant chore for an attacker, and it would be difficult to clear the defenders from the cities. In the southeast, the fighting would be tree-to-tree, stream-to-stream, but there is relatively little of value in the southeast. More likely, a line would be set to prevent invader movement from the southeast to the northeast. The Roanoke, Potomac and Susquehanna Rivers would do this.

The southern forces would be oriented against attack in two places: overland through Central America and by the sea on the Gulf Coast. A gradual pullback along narrow sections of Central America to the Sierra Madre would counter the former threat. The Rio Grande, Pecos, Colorado, Brazos, and Red Rivers are possible fallback positions north of Mexico. A position on the Gila River would protect Phoenix.

An amphibious landing on the coast of Texas could disrupt this plan. It would have to be crushed on or near the beach. If this could not be accomplished, the defenders would have to abandon Texas or fight on the open plains; neither is pleasant. A line on the Red River attached to the Mississippi would be the southernmost practical east-south line.

In the west, there are two major defense lines. The first is the line of the Sierra Nevadas and the Cascades. This range is only two-hundred kilometers away from the Potomac, and continues farther inland. The Rockies, which are a thousand kilometers east of the Sierras at the U.S.-Mexico border, eventually merge with the Cascades at the U.S.-Canadian border. A line on the Rockies would be even stronger than a line on the Sierras, as the Rockies are much higher, broader, and rougher. A pullback from the Sierra-Cascades to the Rockies would abandon significant resources (including oil shale and gambling casinos), but strengthen the defense, shortening the lines connecting the Appalachians to the western defense.

There really is no northern line; the terrain provides defense in itself. Small forces guarding Moosonee and Cape Churchill would be adequate, so long as reserve forces could reach the beachheads quickly. A linear defense in the far north serves no purpose. Alaska would be defended as an afterthought; no concerted effort to hold it would be contemplated, for it simply isn't worth it.

Recapping, the strongest defense line runs from the Gulf of St. Lawrence through the Longfellow Mountains, to the Alleghenies and then down the length of the Appalachians to Memphis. From there, the line can turn south along the Mississippi and follow the coast to the Rio Grande and up to the Rockies, or follow the Canadian River to the Rockies at Santa Fe. From there the line can follow the Rockies up to the Columbia River and anchor on the coast, or follow the Gila River to Phoenix up through the Sierra Nevadas and Cascades to the same coastal anchor at Cape Flattery. This takes advantage of strong natural defenses, mountains and wide rivers. Unfortunately, the use of this "*Festung Amerika*" abandons some of the most important resources in America. Fifty percent of the population lives within 50 miles of the coast, and a war economy could not support itself without the industrial capacity of the coastal cities. An effort would have to be made to hold on the coast, then, at least for a short time, at least in some places.

Holding on the coast presents a problem beyond the obvious one that the front is lengthened. It is made more *convoluted*, and there are no natural defensive barriers along most of the coast, so the fighting would be more free-wheeling than in a fortress assault. The ability to shift reserves quickly from point to point becomes even more important for the defenders.

The most important advantage in mobility the defenders would have is the extensive rail net of North America. Mexico, the United States (except for northern Alaska), and southern Canada are criss-crossed with high-speed, double-track railroads. Railroads are invaluable for rapid rear area transit of reserves, and this importance is magnified by the enormous distances between the Atlantic and Pacific Coasts. The defenders would have much better strategic mobility, and this would enable them to concentrate troops in one sector to defeat one threat, then quickly shift to other areas. This is especially valuable in places like central Canada, where the road net is poor. Defending units could move quickly by rail, while invading forces would be slowed by the poor road terrain.

One of the simplest advantages to the defense is the size of the continent. The distance from

New York to Los Angeles is more than twice that from Berlin to Moscow. Assuming the defense is conducted in a competent manner, and no incredible luck befalls the invaders, the defenders should be able to hold onto most of the continent for at least eight months. This would force the invaders to fight in winter. Winters in the northern U.S. are rough, and in Canada...The Canadians are used to their winters and could likely wear down an attacker just as the Soviets wore down the Germans in the winter of 1941-42. A long war for control of North America would benefit nobody; an invader would have to win a fast victory so as not to wreck his economy. The Americans and Canadians would have to retain control of most of their industrial and agricultural resources.

#### THE SCENARIO

*Invasion: America* postulates attacks by three outside powers: the European Socialist Coalition (ESC), the Pan Asiatic League (PAL) and the South American Union (SAU). Each power launches an independent series of invasions. The following narrative begins just after the first invasion cycle: invasions in Florida and Carolina-Georgia by the ESC, in the Willamette Valley by the PAL, and at Veracruz, Mexico by the SAU (coupled with an overland advance from Columbia). The defenders are on the coastlines, with entrained mechanized units in reserve in the Midwest. Each invasion has successfully reached shore, and the defenders are preparing counter-attacks.

#### March:

In the Southeast, the Defenders' first task is to keep the two beachheads separate. The Georgia beachhead is held by heavy mechanized forces, while the Florida Peninsula is held only by hovercraft. The main East Coast armor reserve is moving south, but will not reach the beachhead before the first counter-attack, so the attack is made against the Florida beachhead, pushing the ESC back slightly and allowing the Defenders' front to anchor on the coast at Jacksonville. Tampa and Miami remain in ESC hands.

SAU armor pushes across the Panama Canal and is stopped on the mountains. At Veracruz the landing is without air support because the SAU has no carriers. American air superiority assures the destruction of the beachhead and smashes an amphibious fleet. (The SAU has made an obvious error: ignoring Defender deployment in choosing a beach.)

The PAL forces do not attack Portland, but a small hovercraft force moves to Cape Flattery to threaten Seattle. The Defenders move forces from California and Canada to positions near the beachhead, while the reserve remains in the Midwest awaiting developments.

#### April:

While freighters reinforce all beachheads, amphibians return to port to load up for next month's cycle. On land, the ESC beachheads link up by taking Jacksonville; the ESC front now runs from Norfolk to Tallahassee. Carriers alone support the forces, now out of range of Cuban support and awaiting shipment of aircraft.

The SAU advance is slowed by heavy attrition in armor. Nevertheless, the front is advancing faster than the air support. The advance is halted at Lake Nicaragua to await reinforcements. The SAU is falling far behind schedule.

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Mongolia and seized Ulan Baator. In early 1921, Red and Mongolian nationalist forces captured and executed him.

#### *Wrangel's Last Stand*

By April 1920, the remnants of the Volunteer forces were holding the Crimea. Deniken had resigned and been replaced by Wrangel. Wrangel was able to scrape together an effective force of about forty thousand. He realized that he could not hope to hold his own against the Reds, but hoped that their ensuing war with the Poles would distract enough Red strength to allow him to hold the Crimea. He even conducted a small offensive and occupied the Taurida.

In August, the Red Armies, under Tuchachevsky, were beaten before Warsaw and, in October, a Russo-Polish peace was concluded. The Reds now concentrated 150,000 men against the Crimea and stormed the Perekop Isthmus on November 11. On the 14th, Wrangel left the Crimea, followed by over 100,000 soldiers and civilians.

The only major force in the field opposing the Reds was Makhno. Throughout the winter of 1920, the Red Armies pursued him westward. In January 1921, Makhno crossed the Rumanian frontier with 250 followers. He later settled in Paris where he lived peacefully for many years.

The Russian Civil War was now technically over. A few bands of Whites roamed about in Siberia and national revolts were still going on in the Caucasus. Everywhere, however, the Reds had been triumphant. To a great extent, their victory was a result of their centralized and determined leadership. Even so, they were helped by the military and political errors of the Whites. Lenin himself later admitted that the Bolshevik victory was due less to Red strength than to the weakness of the Whites.

#### *THE COST*

The toll which the Civil War exacted on Russia is almost beyond comprehension. In human terms, it caused the deaths of an estimated twenty-five million persons. This is probably a low figure. The vast majority of the dead were civilians who perished from disease and starvation. Military deaths were comparatively few and some 85% of those were from disease. The economic structure was in ruins, as were thousands of villages and towns. More importantly, the agricultural situation was in complete chaos. In some areas effective crops had not been raised in years. The stores which did exist had been fed to the armies. The result was a massive famine in which further millions died.

Psychologically, the Civil War left deep scars on the Russian people. Old hatreds were to erupt anew during World War II when such groups as the Cossacks flocked to the Nazi banner.



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#### **INVASION: AMERICA** [cont from page 29]

The PAL takes Portland, but the hovercraft are repulsed at Vancouver. The first PAL mechanized units land and prepare to take Seattle.

The Defenders' main reserve strikes the ESC lodgement, retaking South Carolina and Tallahassee. Air attrition is heavy, with the irreplaceable carriers suffering. An attack in Nicaragua fails, but Portland and Cape Flattery are recaptured. The attacks in Oregon are supported by 60% of the Defender air units. The Defenders are holding fairly well, but attrition is causing a greater reliance on militia to guard the beaches, which could be disastrous.

*May:* The ESC advances steadily, as air support based in the US becomes available. The SAU cracks the line and reaches Yucatan. The PAL retakes Portland, but does not launch a second invasion; the hovercraft re-embark as they will be more useful in a less restricted beachhead. The ESC invasion comes in southern New Jersey and is stopped north of Trenton. The SAU invasion comes at South Texas (1929). American militia crumbles and the SAU armor strikes westward to cut Mexico off from the US. This time aircraft accompany the initial invasion forces.

The Defenders commit the only remaining three armored corps in Mexico, cutting off the westernmost SAU units. Remaining units in Central America pull back to Tehuantepec (0932). In New Jersey, the Defenders do not counter-attack, and attacks against the southern lodgement do little. In Oregon, the massive air support allows the destruction of the PAL beachhead, with heavy losses for both sides. Units entrain for movement to Georgia.

#### *June:*

Atlanta falls to the ESC, as the Defenders fall back to the Appalachians. In New Jersey, the front remains stable, neither side being strong enough for a big push. The SAU pulls back in South Texas and advances steadily on Mexico City. The PAL invades at Los Angeles, taking L.A. and threatening Phoenix.

The Defenders send forces from Oregon to Los Angeles, protecting Phoenix, but lacking time to attack. Militia blocks the path to San Francisco. Airstrikes deplete the PAL carrier force. The Defenders reduce the South Texas beachhead and prepare for a withdrawal north of Mexico City. Minor inroads are made against the southern ESC lodgement, now too big to be wiped out.

#### *July:*

Birmingham falls, but the ESC makes no headway in attacks against the Appalachians. The Defender line is thinning dangerously. The SAU finally takes Mexico City, while the PAL expands its L.A. beachhead, unsuccessfully attacking Phoenix. Small ESC and SAU forces embark for third invasions.

The Defenders assume a defensive posture in Mexico and unsuccessfully strike at Birmingham. The air battle is favoring the Defenders more and more, but ground support is minimal; there are few troops left to support. For the first time, militia is committed to the line against the ESC. In California, the PAL forces are again wiped out under huge air strikes. The PAL amphibious fleet is destroyed, freeing all West Coast forces. Ten corps of armor and infantry entrain for the Southeast, along with several air fleets.

#### *August:*

The ESC lands at Galveston and the SAU at New Orleans; they push in rapidly and link up with the ESC lodgement. The ESC force in New Jersey is wiped out trying to cross the Hudson. The front is stable in Mexico.

The reinforcements arrive from California, and the Galveston and New Orleans beachheads are wiped out in desperate attacks. A strike along the Georgia coast fails. More and more militia is committed, doing more harm than good. Attempts at partisan warfare in the ESC rear are disorganized and harshly dealt with. There are absolutely no Defender reserves left anywhere, and every beach is guarded by militia.

#### *September:*

The ESC tries attacking north, but fails to crack the Appalachians. The SAU makes some progress against a thin screen, but is still four-hundred kilometers from Texas. Very little of economic value has fallen to the SAU, and the failure can be traced to the initial invasion. PAL units land behind SAU lines; they will be useful in the upcoming winter battle for the Sierra Madre. The Defenders marshal what strength they have left to repulse the last attacks before winter.

#### *October:*

The invasions come in Corpus Christi (SAU) and Galveston (ESC). The areas are barely screened and rapid penetration puts invaders in Dallas, Houston and oil and wheat field areas of great importance. The ESC finally takes Memphis and New Orleans; the lodgement front now exceeds two-thousand kilometers in length. Scattered Defender armor faces the units in Texas, while the main front falls back to a line from the Appalachians through the Ozarks and down the Mississippi. Few aircraft are left. The USA and Canada are weak, but so are the ESC and PAL.

None of the weakened economies can support this bloody, inconclusive war. With winter coming on, the invaders are anxious to negotiate; the Defenders are anxious to salvage what they can from a losing war. As snow begins to fall in Washington and Zurich, the four powers come to an agreement. The United States will share its mineral and agricultural wealth with the world. In return, most foreign forces will be withdrawn and the conquered areas returned to American civilian administration. The world pulls together in its hunger, strangely, closer than ever before. At least, it *might* work out like that.

Admittedly, *Invasion: America* postulates a rather improbable set of developments. A Soviet-Chinese-South American alliance seems most unlikely, but stranger things have happened. If the current trend of diminishing American influence in the Third World continues, it is conceivable that the rest of the world would "gang up" on the USA. As the world grows poorer in fossil fuels, in food, in minerals, while its population increases, the enormous wealth of the United States will seem more attractive. Starvation breeds desperation and desperation breeds action. And if the world's economy doesn't improve, there is some chance of an *Invasion: America*.

