

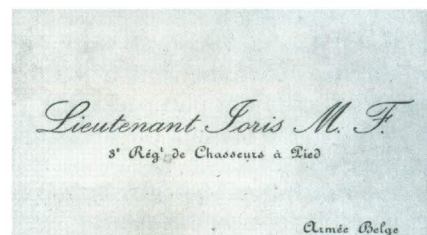
Lt. Joris, Belgium, and WW1's East African Sideshow

by Ralph Reiley

Lieutenant M. F. Joris was an officer of the Armée Belge, the Belgian Army. His photographs indicate that he was in the Belgian Army at the start of the war in 1914. He spent some time in the trenches in 1915, then found himself in the Belgian Congo in 1916, as an officer in the Force Publique. The Force Publique served as both colonial police and military of the Belgian Congo. Lt. Joris started the war serving with the 3 Reg. de Chasseurs à Pied, 3rd Light Infantry Regiment. This regiment was part of the 17th Mixed Brigade, which was part of the 5th Division, with headquarters at Mons. In 1914, the Belgian army consisted of six infantry divisions and one cavalry division. The divisions of the Belgian army were stationed near the borders and coast, to block the path of any invader. The 5th Division guarded the border with France. Belgium had been neutral since the Treaty of London in

1839, and maintained a standing army to insure its neutrality. In 1914, the Belgian army was about half way through a modernization program, so the army was a mixture of old and new equipment and uniforms.

When WW1 began, the armies of all the nations involved instituted strict censorship of all information concerning the war, especially photographs. This practice was strictly adhered to throughout the war, but there seem to have been some exceptions to the rule. A small number of soldiers smuggled cameras into the front lines, and some of these were stereo cameras. French newspapers paid top dollar for a photo of a shell exploding in No-Man's-Land, and a number of French soldiers risked their lives to get such a shot. Commercial stereo photographers seem to have been given access to the front lines in a very few places. The British publisher, Realistic Travels, sold photos taken in the front lines



The calling card found with several hundred glass stereo photos.

of the Gallipoli Campaign, and the African campaigns. The German publisher, NPG, Neue Photographische Gesellschaft, (New Photograph Company), sold stereo views taken in the front lines on the Eastern Front.

Lt. Joris was a stereo photographer. Unfortunately he was not a particularly gifted photographer, something I can well relate too. He did photograph some very interesting things during extraordinary times but did not leave behind a lot of informa-



The man in this photo shows up in many of the African photos, and I believe it is a self portrait of Lt. M.F. Joris, taken in 1914, just prior to the start of the war. He is well dressed, and looks to be a very sturdy and solid man, with a strong jaw, and a high forehead.

A farm house damaged by the war and flooded by the opening of the dikes at Nieuport, Belgium. Unlike this house, many of the farm houses in the flood zone were slightly elevated, and used as observation posts by building boardwalks out to them.



Soldiers of the 3rd Reg. de Chasseurs à Pied in a bomb proof bunker with a French made Hotchkiss machine gun. The soldier on the right is holding a clip of 25 rounds for the machine gun. This gun was air cooled and very reliable, but had a slow rate of fire. The bunker the soldiers are in kept them safe from shrapnel. In WW1, a shrapnel shell exploded in the air, releasing a rain of lead or steel balls, much like a shot gun or canister shot from the muzzle loaded cannon era. The bunker would not have protected them from a high explosive shell,



which had a contact fuse and burst when it struck a solid target. The soldiers are wearing the new khaki uniform, made in England, dating this photo to 1915.

tion about himself or his photographs. He did leave behind his calling card and several hundred glass stereo photos, in boxes with only a few notes on where and when they were taken. Lt. Joris openly photographed his time in the army in Belgium and Africa. It is not known why he was allowed to photograph so openly. No details about Lt. Joris's service in the army have been found, other than the small vignettes his photos provide on the opening battles of World War 1, and the campaign in German East Africa. It is not known if he survived the war or not. None of the photos are amazing. A few are in focus and well exposed. Most are tragically out of focus, poorly composed, or poorly exposed.

Others show the ravages of time on fragile glass images. But they do capture a unique time in history. The towns and villages of the Belgian Congo and German East Africa in these photographs show the very comfortable lifestyle the Europeans had built for themselves at the height of the colonial era. The photos of native villages show a way of life unchanged for centuries. A number of the photos have the same man in them. One is a portrait in a back yard in Belgium, the others in the African bush. It is likely that this man is Lt. Joris, although not a 100% certainty. If it is not Lt. Joris, then the mistake is mine.

By the end of 1914, the Germans had overrun most of Belgium, except

for a small western corner at the French border. The Belgians held a line that began at Nieuport on the coast, and ran North West past Dixmude, down towards Ypres, where it joined the British sector of the front lines. To stop the German advance the Belgians had opened the dikes at Nieuport, and flooded the area all the way from Nieuport to Dixmude. On one side of flooded lowland were the slightly elevated Belgian lines. The Germans held the slightly elevated area on the other side. The area in between was impassible while the dikes were open. While the flood barrier kept the Germans from advancing, it also kept the Allies from reclaiming the area. Africa was the only other front where Belgian soldiers could serve under Belgian command and fight back against the



The Belgian army was a mix of the old and the new in 1914. They were well equipped with machine guns, as these British made Maxim guns show, and they were moved into action on carts pulled by dogs. The soldiers are wearing the standard dark blue Belgian uniform of 1914. This was probably taken in August of 1914, in the first weeks of the war.



An above ground trench in Belgium. This is probably a 2nd or 3rd line trench, in a photo taken in 1915. The water table was so close to the surface that trenches in parts of Belgium could not be built in the ground, but were built above ground. The idea seems insane even for WW1, but they were not uncommon when water was close to the surface. Enemy artillery fire constantly tore them to pieces, and they were constantly rebuilt. It was a common practice if one's trench was even

two inches higher in elevation than the enemy's, to set the drains into No-Man's-Land. This insured that your water drained into the enemy's trench, adding to his misery.

Germans who had devastated their country.

The major battlefields of World War 1 were on the Western Front, the Eastern Front, and the Italian-Austrian Alps. Historians have relegated the other battlefields on other fronts as "Sideshow" to the main theaters of war, although the fighting at these sideshows could be just as fierce and deadly as the Western Front. These other fronts were in Salonika, a province of Greece (a tricky situation since Greece was neutral), Turkey and the Middle East, Africa, China, and some island groups in the South Pacific.

The region known as Germany had not been a unified nation since the days of Charlemagne, although the region shared a common cultural heritage. Modern Germany did not exist until 1871, after the German States defeated the French during the Franco-Prussian War. In the French Palace of Versailles, Wilhelm the 1st, the King of Prussia, declared the Ger-

man Empire and himself as the German Emperor. He also maintained his title as the King of Prussia, as did the Kings of Bavaria, Hess and Württemberg. Germany was very late in becoming a nation, and getting into the colonial empire game. By the late 1880s, Germany had acquired colonies in China, Africa, and the Pacific Islands. In 1914, these colonies were cut off from Germany at the start of the war as the German High Seas Fleet was not powerful enough to protect the far flung empire. The German colonies in the Pacific were the first to fall, some so remote that they learned of the outbreak of war when enemy occupation troops arrived.

By the end of 1915, all of the German colonies had fallen to the Allies, except for Deutsche Ost Afrika, German East Africa. The colony was made up of modern day Burundi,

Rwanda, and parts of Tanzania. It was a large and profitable territory with complex geography, including parts of the East African Rift, Lake Tanganyika, Lake Victoria, and the ports of Tanga and Dar es Salaam, on the Indian Ocean. The colony was three times as large as present day Germany. As the story goes, shortly after the Germans claimed this region, Queen Victoria, the Kaiser's Grandmother, gave him Mount Kilimanjaro as a gift. The Kaiser had no mountains in any of his foreign colonies, so his grandmother gave him one. Mount Kilimanjaro is an extinct volcano that is one of the most picturesque mountains on the planet. The story has no basis in fact, but it is such a great story that it should be true, even though it is not.

European colonies in Africa were pacified by brutal and repressive means. The same means were used

by the French, British, Portuguese, Belgian and German colonial rulers. There were frequent native uprisings in the African colonies, and they were put down with deadly force.

There was serious fighting between native tribes and German forces in Deutsche Ost Afrika until 1906. After that, a relatively peaceful and very prosperous colony began to develop.

A grand colonial exposition was planned for the end of August 1914, at Dar es Salaam, but the war interfered and the exposition was cancelled.

The Europeans all raised colonial military and police units made up of Askari, the African term for native

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A large shell hole in a cemetery made by German artillery, and a shadow portrait of the photographer and his camera. I assume that this is Lt. Joris, and by the looks of the shadow, he is using a camera small enough to hold in his hands, and not requiring a tripod. Many photos were made of artillery damage to cemeteries by the Germans. They were used as propaganda against the Germans as mindless destruction of sacred property. A cemetery was part of a church, the church had a tall bell tower, and bell towers were used by artillery spotters. This made them targets for both Allied and German artillery.
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Somewhere in Africa with the Belgian Force Publique. The gun is the Vickers 37mm automatic cannon, also known as the Pom Pom gun. This gun was also used by the Germans. It was devastatingly effective in the jungles and was also used as an anti-aircraft gun. It was basically a scaled up version of the Maxim machine gun, but with a much slower rate of fire. The name Pom Pom was given to it by African natives, from the sound it made when fired.
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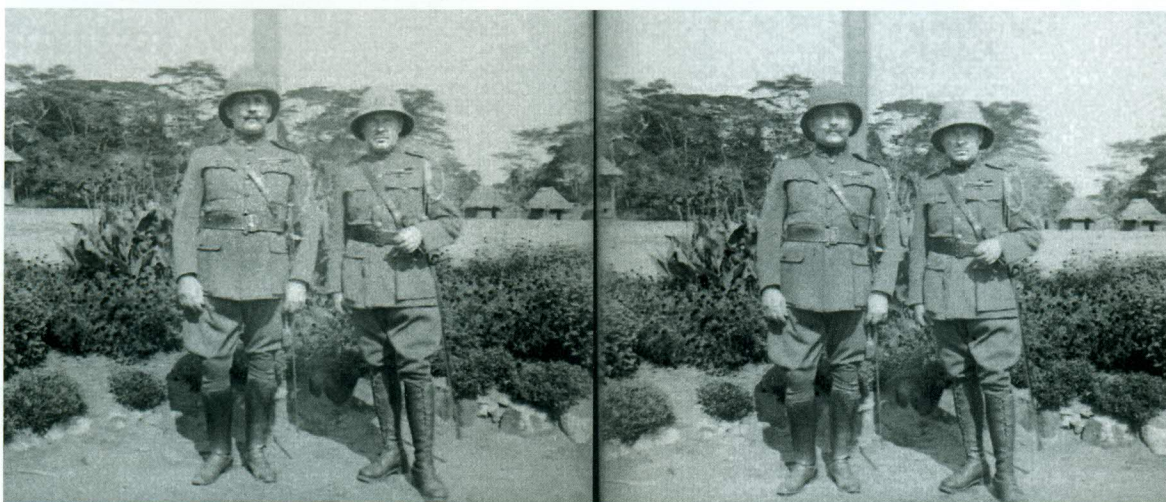


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Lt. Joris, seated at left, and another Belgian officer, in the German East African bush. The gun is the 47mm Nordenfelt mountain gun. The Belgians had 16 of these small artillery pieces in the Congo in 1914. While it looks like a toy cannon, it was devastating in Africa when it was used against natives armed with spears and animal hide shields. The British, French and Germans made use of similar sized artillery in their African colonies.
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An unknown village in Africa used as a base camp during the campaign of 1916. Note the 47mm Nordenfolt mountain gun in front of the officer's tent. Unfortunately, there is not enough information to determine when or where the photo was taken. It is possible that the village is in German East Africa. It does show the primitive and rugged conditions the soldiers had to contend with, not to mention the native Africans who lived in the village.



Lt. Joris, at right, and another unidentified Belgian officer. The photo was taken in 1916, and appears to have been taken at the end of the German East Africa campaign. The photo is part of a sequence taken on a day of victory celebration and may commemorate the Belgian occupation of their portion of the former German colony. Both men are wearing new dress uniforms. The photo is not clear enough to identify the rank insignia on either of the officers' collars, so

it is not clear what rank Joris had in Africa. The calling card found with his photographs indicates that he was a Lieutenant in Belgium but he could very well have received a promotion in Africa.

soldier. The Askari were always commanded by European officers who typically treated the men under their command with disdain and contempt. There was much discussion in pre-war Europe on limiting the size of native armies, and how well native troops should be trained and how well they should be armed. There was a certain level of concern about teaching the Askari modern military methods, out of fear that it would lead to a well armed and organized revolt. The Germans were unique in training their native soldiers to the same standards as their European soldiers. The colonial army units were organized into companies. Due to the vast size of these colonies, these companies of Askari operated independently from each other for weeks or months at a time. They were usually armed with obsolete rifles, light artillery pieces and a few machine guns. They fought against tribes armed with spears and animal hide shields, where even obsolete

weapons were devastatingly effective. The British had the Kings African Rifles, or KAR, the Germans had the Schutztruppe, the Belgians had the Force Publique. In 1914, all were unprepared for the events about to overtake them.

There was a conference in 1913 with the colonial governors of east and central Africa. They discussed the possibility of their nations going to war, and how European affairs had little to do with what was going on in Africa. The colonies were productive and prosperous, and the quarrels in Europe were of little concern to Africa. Also, it would set a dangerous precedent for the Askari of one colony to fight and kill Europeans of another colony. They all pledged to keep Africa neutral in case of a European war. When the war did break out, the colonial gov-

ernors did what they could to keep the war from spreading to their colonies. The colonial military men, as well a majority of the male colonists all caught war fever, and things began to escalate. The British, French, and Belgian colonial service saw an opportunity to annex the German colonies with the thought that the Germans could offer little resistance.

A full accounting of the German East Africa Campaign is beyond the scope of this short article. It was one of the most unusual military campaigns in modern history, with combined air, land and naval operations. Both sides had charismatic leaders of great ability, as well as leaders so incompetent that it staggers the imagination that they were not shot for criminal stupidity. There were moments of strategic brilliance, and

moments of lost opportunities. Casualties were very high during the campaign. For every man killed in action, 30 died from disease. At times it seemed that the land itself was at war with the armies. Swarms of bees, angered by bullets riddling their hives ended a number of small battles. Battles were broken off when a pride of hungry lions appeared on the scene, or an enraged rhinoceros chased everyone from its territory. Rain and mud were standard on the Western Front; but in Africa the rains were so heavy and constant that the rainy season ended all military operations for weeks or months at a time.

The Tsetse fly, flesh devouring fleas, deadly Guinea worms in the water,

malaria carrying mosquitoes, fever carrying ticks, dysentery, and other varieties of jungle infections inflicted misery and death to man and pack animal alike. All the soldiers of both armies suffered from malaria to some degree, making quinine as important as ammunition. Certain areas were infested with the Tsetse fly, infecting sleeping sickness to man and pack animals. An untreated scratch could turn septic and kill a man. One man who drank water that had not been boiled grew sick, and died. An autopsy revealed that the man's body was full of Guinea worms, some 30 inches in length. Flesh devouring fleas burrowed into feet and ankles, leaving the foot looking like bloody rags. The fleas and their egg sacks had to

be pried out with needles. African women were adept at plucking them out with long thorns.

Colonel Paul Emil von Lettow Vorbeck, the commander of the Schutztruppe in East Africa, was a remarkable military leader. He gave his Askari the same respect that he gave his German soldiers, and demanded the same level of training and discipline from both. He mobilized the entire colony, and it became totally self sufficient, with no supplies from Europe. Lettow Vorbeck knew he would be cut off from Germany, and his strategy was to harass the enemies of Germany so that as many men as possible would be diverted to Africa, and away from Europe. His army was never larger than 14,000 men, of which about 2000 were Germans. At one time the combined British, Belgian and Por-

Belgian Askari of the Force Publique being trained with the use of the Hotchkis machine gun and trench warfare. Note the 25 round clip on the left side of the machine gun.

One man operated the gun, while another fed clips of bullets into it by hooking the next one into a slot of the clip already engaged.

By 1916, the idea of sweeping the enemy from the battlefield had given way to just pushing the enemy out of his front line position. The Germans knew they had to keep very mobile, and wage a hit and run campaign as the Allied forces greatly outnumbered them, so they never stayed in place long enough to construct trenches.

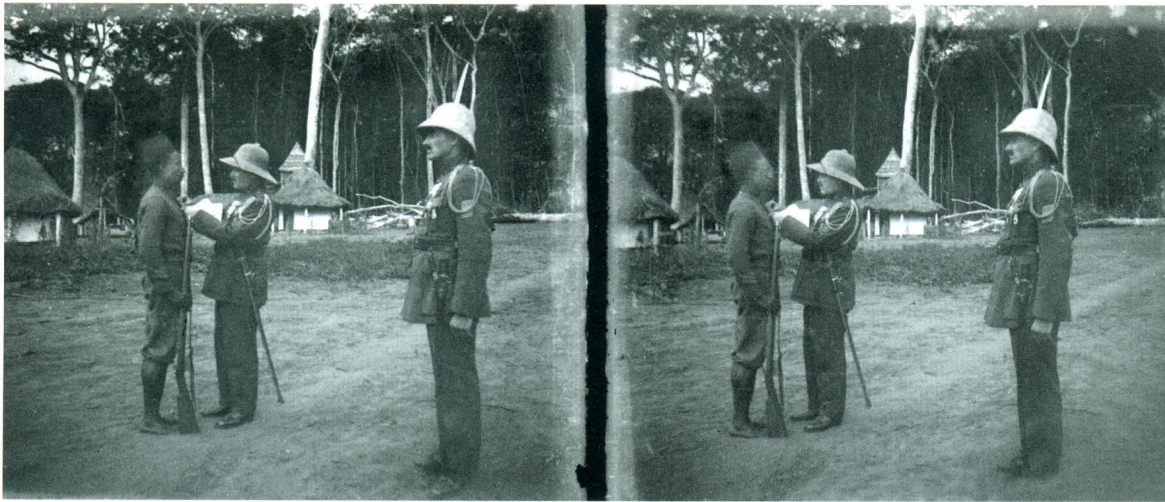


Belgian Askari of the Force Publique at target practice. The usual enemy of the colonial army had been rebellious natives, armed with spears and animal hide shields.

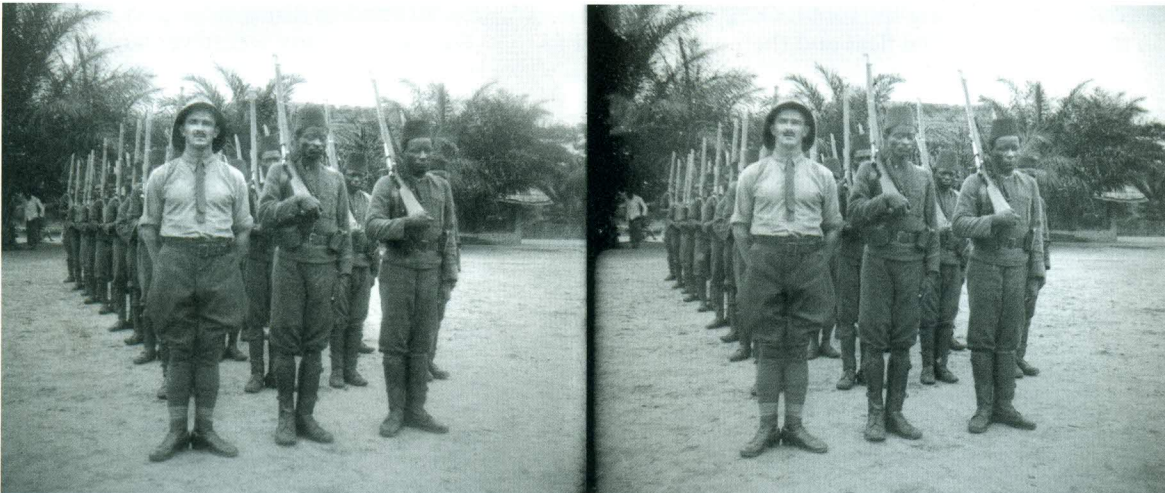
Fighting the German Schutztruppe meant that the soldiers needed to be much better prepared, as they would be fighting an enemy with weapons and training equal to or better than their own. Most Force Publique soldiers were armed with the single shot 1873 bolt action Albini rifle. Very few of the Force Publique companies were issued

the 1899 Belgian Mauser rifle, which had a five round magazine. The German Askari were mostly armed with the 1871 Mauser rifle, an innovation at the time of the Franco-Prussian war, but obsolete in 1914, except in Africa.





Lt. Joris giving one of his Askari a medal. Note the dress uniforms of the two Belgian Officers, and the clean uniform of the Askari. This photo is from a sequence apparently taken after the end of the East African campaign of 1916, when the Belgians were settling into occupying their portion of the former German colony. The photos indicate that an important Belgian official was to arrive by train for a day of victory parades and awarding medals.



A portrait of Belgian Askari of the Force Publique with their officer. Note the 1873 Albini rifle all the soldiers have on their shoulders. Africa was a good place to send obsolete weapons when the army at home received modern ones. This photo is part of a sequence apparently taken after the end of the 1916 campaign, when the Belgians were occupying their portion of the former German colony.

tuguese forces combing the bush for him numbered over 100,000 men. This does not include the untold thousands of native porters used by both sides. Lettow Vorbeck carried out an ingenious hit and run guerilla campaign, and never fell into the trap of a major battle, where his forces would have been vastly outnumbered. He had the respect and admiration of his German soldiers, the Askari of his Schutztruppe, and that of his opponents in the British and Belgian armies.

The war in East Africa began in November of 1914. The British attempted an amphibious landing at Tanga, the northern port city with partially trained native troops from India. It was a disaster for the British, mainly due to the bungling of the British commanding officer, who refused to believe any of the intelligence reports about the abilities of the German Schutztruppe. The Germans captured enough rifles and machine guns left behind by the retreating British forces to arm several companies of Schutztruppe with

They seem to have been getting ready for the arrival of an important Belgian official, complete with dress uniforms and a grand parade to celebrate the hard won victory.

modern weapons. The war in East Africa gradually escalated through 1915. The Germans generally dominated the land war, and captured some British territory around the base of Mount Kilimanjaro. They did lose control of Lake Tanganyika. Armed Allied motor boats overwhelmed the armed German motor boats, and they were all sunk or scuttled by their crews. *SMS Konigsberg*, a cruiser cut off from home, had taken refuge in the Rufigi River delta after a short commerce raiding career in the Indian Ocean. The ship was located and sunk by the British navy in a remarkable six month long land, air and sea operation. The ship's 105mm guns were intact, so they were removed from the wreck, put on primitive field carriages, and became Lettow Vorbeck's heavy artillery, much to the dismay of the British army. The sailors and marines on board *SMS Konigsberg* joined the ranks of the Schutztruppe.

In July 1916, a three pronged invasion of German East Africa began, lead by General Jan Smuts of South Africa. He was an unusual choice for the British, as he was a Boer, and fought against England during the Boer War. British forces moved into the north from British East Africa, a British colonial force from South Africa moved in from the south west from Rhodesia, and a combined British and Belgian force moved in across Lake Tanganyika from the North West. The Belgian force was commanded by General Charles Tambeur, who became the Military Governor of Belgian Occupied East Africa. The British and Belgians had a difficult time coordinating their efforts. The British were suspicious of the Belgian's motives, and feared they were just interested in grabbing some very fertile territory for Belgium. The Belgians were suspicious of the England's motives, as they feared they were just interested in

grabbing some very fertile territory for England. Of course this is exactly what both nations were up to, and

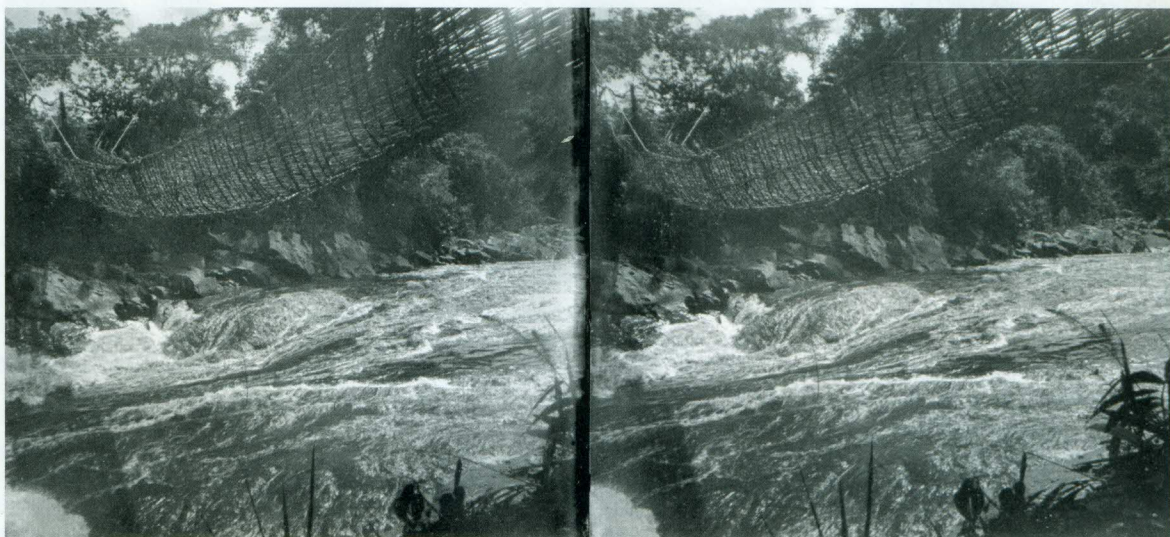
both were successful, although England ended up with most of the territory.

By the end of 1916, most of the fertile and prosperous areas of German East Africa were under Allied control, but Lettow Vorbeck and the Schutztruppe were still at large in the bush. Lt. Joris was among the Belgian troops that invaded north of

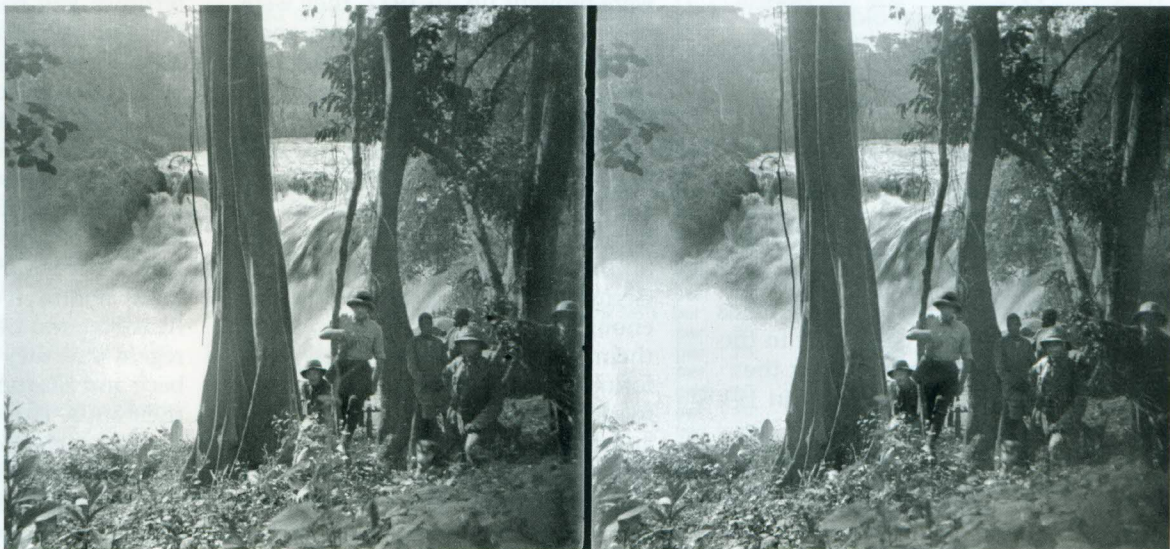
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The railroad station at Lugufu, located 33 miles east of Kigoma, the port on Lake Tanganyika where the Belgian invasion of German East Africa began. Lugufu was a town large enough for a European style train station on the railroad that ran from Dar es Salam on the Indian Ocean to Kigoma on Lake Tanganyika, a distance of 770 miles. The Germans had just recently included this region around Lake Tanganyika into their African colonial empire, and the local tribes were still resisting the idea that their ancestral land was no longer their own. They greeted the Belgian forces as liberators until they discovered that one European occupying force had been replaced by another.
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This rope bridge across an unknown river somewhere in German East Africa gives one an idea of the primitive conditions the soldiers had to contend with in waging a military campaign in Africa. Just keeping body and soul together in the jungle would be a daunting task, not to mention waging war.
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Somewhere in the African Bush during the German East Africa Campaign. The Belgian officers and Askari of the Force Publique look more like extras on the set of a Tarzan movie than soldiers. The river in the background gives a good indication for the difficulties in mounting a military expedition in the jungles of central and east Africa. Unfortunately Lt. Joris left no record of when or where this photo was made.
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Somewhere in the African Bush during the German East Africa Campaign. A Belgian officer strikes a heroic pose as the Great White Hunter. He appears to be holding a shot gun. A number of the photos show that officers and enlisted men engaged in hunting and fishing. Some fresh meat and fish were probably a welcome addition to the standard fare during a campaign in the jungle.



A very staged view of the operation of the Nordenfolt 47mm mountain gun. An officer on the right is holding the lanyard that fires the gun, while an Askari on the left holds a shell. The small wheel behind the gun barrel was used to raise and lower the trajectory of the gun. The breach mechanism was operated by twisting the double hand grip on the breach block. It was a very ingenious advancement in breach loading artillery. An improvement of this breach block was used on the

Lake Tanganyika. They proceeded south along the shore of the lake, to the town of Kigoma, which was a port on the lake, and the end of the railroad that ran all the way to Dar es Salaam, a port city on the Indian Ocean. The Belgians proceeded along the railroad to the town of Tabora, and stopped. Tabora was an important town, as several old caravan routes passed through there. There had been a large wireless tower at Tabora, but the Germans destroyed it as they evacuated the town. This was nearly the end of the Belgian involvement in the East African Campaign. They had captured a large and fertile region, with a railroad, and they were content with a hard fought victory, as the Germans made the Belgians pay dearly in the lives of the Force Publique for the territory they captured. Later in 1917, when Lettow Vorbeck and the Schutztruppe were headed north, towards Tabora, the Belgians again assisted the British.

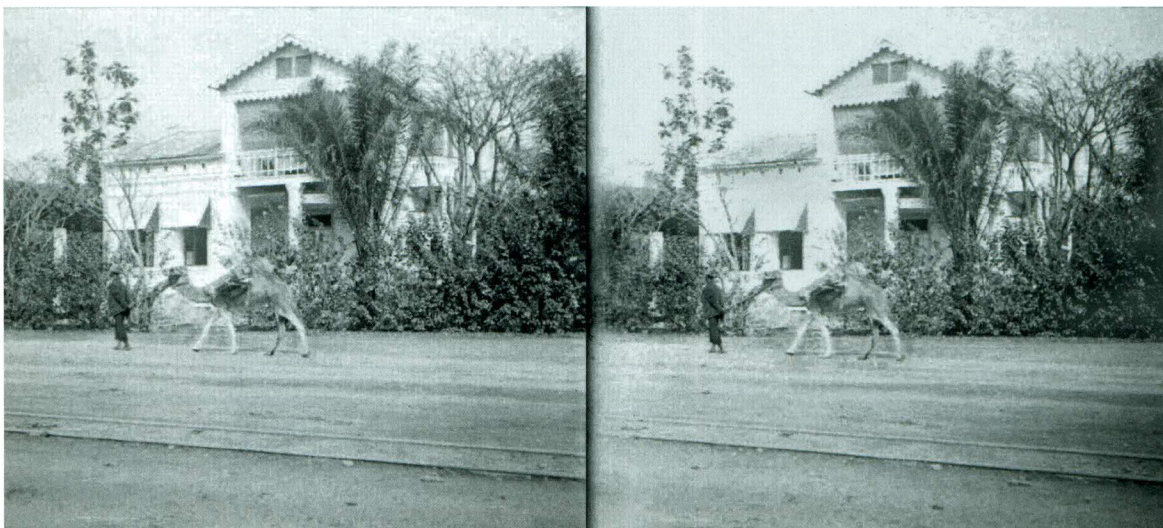
1897 French 75mm field gun, one of the best field artillery pieces used in WW1. The British and Germans were also armed with small artillery pieces such as this. The naval guns salvaged from SMS *Konigsberg* gave the Germans a great advantage with some actual heavy artillery when they were placed on crude field carriages.

Lettow Vorbeck and the Schutztruppe would set up an ambush, and then disappear into the bush when allied reinforcements were brought up. In 1917, they were driven out of German territory and into Mozambique, a Portuguese colony. The natives had no love for the Portuguese, and welcomed the Germans as liberators. They provided what aid they could to the Germans, and provided the Portuguese and British troops with false information on the whereabouts of the invading German force. They captured enough Portuguese arsenals to equip themselves with modern rifles, uniforms, boots, medical supplies, and food as well as enough equipment and quinine to last them for several more years of guerilla warfare. In 1917, a zeppelin flight was planned to carry supplies to the German force.

When the zeppelin was close to the German colony, it was recalled when reports came in that the Schutztruppe was no longer in German territory, and had supplied itself at Portuguese expense. See *Stereo World* Vol. 37 No. 1 for details of the flight.

The war ended on November 11, 1918. On November 13, 1918, Lettow Vorbeck received a telegram. It was delivered by a British soldier on a bicycle, with a white flag. It was from the British commander informing him the war was over, and Germany had been defeated. The British held him and his men in such high regard that they allowed Lettow Vorbeck and his top officers to keep their arms. This was the highest honor a victorious commander could offer his opponent. Lettow Vorbeck and his men were allowed some time to prepare, and were told to march

The contradiction that was Colonial Africa. This photo has two things that do not belong in Africa, the European house and the camel. The time and place of this photo was not recorded. The large German style house in the background indicates a fairly large town, such as Tabora, where the Belgians ended their advance into German East Africa. Tabora was a hub for ancient caravan routes, which may explain why a man is leading a camel down the street.



to Abercorn, a town in the Belgian Congo, where they formally surrendered on November 23, 1918. The Askari of the Schutzgruppe were all repatriated back to their homes, and the German officers and enlisted men were treated as honored guests of the British, and never as prisoners of war. Lettow Vorbeck arrived back in Germany in 1919, to a heroes' welcome.

After the war, Lettow Vorbeck and Gen. Jan Smuts, the British commander of the 1916 invasion, met and became lifelong friends. Lettow Vorbeck was active in German politics for the rest of his life. He survived WW2, and was a vocal opponent to the Nazi cause. Both of his sons served in the Wehrmach during WW2, and both were killed in action. He died in 1964, and was given a state funeral. One of his Askari served as a pall bearer. Nothing has been found on the fate of Lt. Joris, leaving his photographs to speak for themselves. It is not known if he survived the war and lived to a ripe old age, or died in Africa during the campaign.

While the Germans waged a remarkable campaign, the human cost was staggering. A rough estimate is that 100,000 people died during the campaign, including soldiers and civilian porters. The vast majority of the deaths were from disease and exhaustion. The towns and villages of German East Africa were devastated, and the Germans destroyed the railroad bridges they had so meticulously built as they retreated. The remarkable lifestyle the German colonists made for themselves in Africa was gone forev-

er. The first seeds of freedom from the colonial rulers had been planted. It would take a few more years for the seeds to take root, but just as the pre-war colonial rulers had feared, training Askari to fight Europeans did lead to organized and well armed rebellions, that eventually led to the end of the colonial era in Africa.

A final note on the photos; Lt. Joris shot several hundred photos during his service in Belgium and Africa. No documentation as to when and where he took his photos have been found. This makes a lot of his photos unusable as historical illustrations. As stated before, he was not a gifted photographer, further limiting his photos to the ones that are in focus and properly exposed. His photos are unique, and were taken during extraordinary times in extraordinary places, under very difficult conditions. They do illustrate a colonial era that no longer exists. It was a very comfortable lifestyle for the Europeans, but a very fragile lifestyle and dependent on the cooperation

of the native population, which was not given freely.

This article would not have been possible without the generosity of Robert Boyd. Lt. Joris' photos are in his collection, and he kindly gave me copies of them to use for this article, as well as his research notes. I also owe thanks to Ralph Lovett for identifying the 47mm Nordenfelt mountain gun.

Sources:

- The Great War in Africa*, Byron Farwell, W.W. Norton & Company
- Armies in East Africa*, Peter Abbot, Raffaele Ruggeri, Osprey Publishing
- The German Colonial Empire*, Woodruff D. Smith, University of North Carolina Press
- Historical Atlas of World War 1*, by Anthony Livesey, Henry Holt and Company
- The Belgian Army in World War 1*, R. Pawly, P. Lierneux, and P. Courcelle, Osprey Publishing
- My Reminiscences Of East Africa*, Gen. Paul Emil von Lettow-Vorbeck, Hurst & Blackett, Ltd.

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