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## Section 2

### ABSTRACTS OF FOREIGN-LANGUAGE ARTICLES

This section contains abstracts of important articles from foreign military periodicals; the remaining articles for each magazine are listed in Section 4.

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#### ABYSSINIA

##### A Military-Geographic Study

By Corporal F.W. Merten, U.S. Army

All of the African states were gradually annexed by the European colonial powers, except the Empire of Abyssinia—or Ethiopia, as it is called officially—which remained the only sovereign state on the dark continent (except Liberia). Next to Egypt and China, Ethiopia is one of the oldest states in the world. Twice the Ethiopians were forced, in the course of the last century, to take up arms in defense of their independence. In 1875, the Egyptians, under Munzinger Pasha, attempted to conquer Abyssinia, but were repulsed. While Italy was more fortunate in the beginning, she could not attribute her successes to the achievements of her own armed forces. The Abyssinians successfully opened the campaign and inflicted a serious defeat upon the Italians (25 January 1887), but were unable to carry the operations to a final victory. Mahdist forces had invaded Abyssinia from the west and, being considered the more dangerous enemy, had to be repulsed first. This was accomplished in the Battle of Metammeh (8 March 1889); it was in this battle that the

Abstracted from *Wissen und Wehr*, August 1935. "Abessinien. Eine wehrgeographische Betrachtung," by Friedrich Papenhusen.



then Emperor John IV was killed. He was succeeded by the famous Menelik II (1889-1913). Foreign entanglements being contrary to his newly acquired monarchical interests, Emperor Menelik II deferred the dispute with Italy by signing the Treaty of Ucialli (2 May 1889). The terms of this treaty definitely fixed the boundaries separating Italy's possessions from Abyssinia. Menelik furthermore obligated himself to deal with other nations exclusively through the Italian Government. Italy explained this obligation as constituting a form of Italian protective rule. Ethiopia, however, protested against this interpretation of the Treaty. War ensued, and the Italians were completely defeated. The victory of Adowa (1 March 1896) and the peace of Addis Ababa (26 October 1896) gave Abyssinia her independence. In Article 3 of the peace treaty, Italy recognized without reservations the complete sovereignty of Ethiopia.

The defeat sustained by the Italian forces at Adowa is the most disastrous one that has ever been inflicted upon an European army by colored troops (except Cannae). The Italian expeditionary forces were completely wiped out. Barely one-third of the contingent succeeded in retreating to the frontier. All guns as well as every field and combat train fell into the hands of the enemy. Broken was the conviction that Europe's arms could not be conquered. Africa triumphed over Europe. No wonder that this victory caused Abyssinia's prestige to be raised considerably in the eyes of the European powers and that the former's self-confidence grew.

Despite the fact that Italy solemnly declared, in 1896, that it would recognize Abyssinia's independence, and notwithstanding the fact that "permanent peace" and "everlasting friendship" were promised in a new treaty concluded in 1928 and reaffirmed in September, 1934, Italy never abandoned the hope of gaining possession of this resourceful country. When minor troubles arose at Gondar, Ual-Ual, and Lamaba, Italy mobilized two divisions. In the course of time, however, a force comprising more than 200,000 men was transported to Africa. These Italian soldiers were recruited in the main from South Tyrol whose natives are best fitted for mountain warfare. Whether these men will stand the African climate, is rather doubtful. Inclusive of the

troops still remaining in the garrisons at home, Italy now has at her disposal 640,000 men for service in East Africa. Inasmuch as Eritrea, Somaliland, Tripoli, and Lybia fail to meet Italy's demands and requirements, Italy might welcome a conflict for the purpose of acquiring further Abyssinian territory. This assumption is all the more plausible since an extension of the Italian colonies in any other direction may be accomplished only at the expense of Great Britain and France. Both these latter powers having met—that is, met at least from their own point of view—the obligations incurred by signing the secret Treaty of London (24 April 1915), they may no longer be expected to accommodate Italy. Finally, there is the fact that Japan is gaining a foothold in Abyssinia, which compels Italy to make a decision.

The Treaty of Rome (7 January 1935), which may well be regarded as the termination of the Treaty of London, so far as France is concerned, undoubtedly has influenced Italy's measures against Abyssinia. Along the shore of the Strait of Bab-el-Mandeb, France ceded to Italy a strip of land measuring approximately 600 square miles and extending to a point north of Obok. With regard to size, this territorial gain is of little consequence. Yet its strategic advantage is considerable. Italy not only has pushed forward to the Gulf of Aden, but, by acquiring the island of Dumerra, has gained also a position of great strategic importance. The construction of fortifications on this island would further enhance its strategic influence on the Straits and would be of no little importance for operations directed against Abyssinia.

Although Italy temporarily seemed to be adopting a conciliatory attitude, she was merely trying to gain time preparatory to the conflict and in order to camouflage her actual plans. For Abyssinia is an important factor in Italian foreign policy. This is proved by the expressions voiced by various Italian statesmen, which may be regarded as a reply to the rapprochement between Abyssinia and Japan. For instance, General de Bono declared that the key to Italy's expansion in East Africa may be found in Abyssinia, and that the ambitious and energetic youth of the rejuvenated Italy is entitled to such an expansion. This opinion is of particular importance in view of the fact that General de Bono was recently appointed Governor of Eritrea and Somaliland. The Assistant Secretary of Colonial Affairs has expressed himself



in a similar vein. In the latter's opinion—"Italy has no alternative but to adopt suitable measures to bring Abyssinia to her senses. The Ethiopian Empire is not pursuing a wise policy in opposing the economic evolution of the European nations, while flirting with Japan." In the end, the armed conflict which took place at Ual-Ual clearly demonstrates Italy's aggressive intentions. This incident has been referred to as a border conflict. This is a rather bold claim; for, even on Italian maps, Ual-Ual is located approximately 60 miles inland. Hence the Abyssinians were fully justified in attacking the Italian military camps that had been established in their own country.

Abyssinia is an inland state. It is separated from the Red Sea by Italian Eritrea which extends into the Plateau of Habesh. Tadjoura Bay, a part of the Gulf of Aden, is that part of the Indian Ocean which lies nearest to the Ethiopian Empire. It is here that the important harbor of Djibouti is located; this seaport constitutes Abyssinia's only port of entry that may be reached by rail. Djibouti, as well as a zone approximately 45 miles deep surrounding the port, belongs to France. Then there are British and Italian Somali-land which shut off Abyssinia completely from access to the sea. Against the interior, Ethiopia is blocked by British possessions.

Whereas, on the other hand, Abyssinia's geographical position in general may justly be considered unfavorable, the position of an inland state, on the other hand, offers certain advantages. Ethiopia owes her freedom and independence less to her recognition by Italy than to the circumstance that her territory is bounded by the possessions of the three great colonial powers. In a treaty signed 13 December 1906, France, Great Britain, and Italy declared that Ethiopia's integrity was favorable for all concerned and, therefore, should remain unchanged. In the event, however, that the political situation should change—with reference to the activities of Empress Taitu resulting from Menelik's illness—the three powers obligated themselves to a mutual safe-guarding of their interests. Article 4 of this treaty describes the interests in detail; it is from this description that we may glean that, notwithstanding those beautiful phrases full of love for Abyssinia, the three powers were actually considering an eventual partition of Abyssinia. Except for the jealousy of the three powers

concerned, this partition probably would have materialized long ago.

Abyssinia's economic development and her present influence on the world market are so negligible, that the overtures made to Ethiopia by her neighbors are so difficult to comprehend. On the other hand, there is considerable opportunity for future development. If systematically exploited, especially with the aid of artificial irrigation, this country could furnish cotton, tobacco, coffee, tea, sisal, and many other products of tropical and semi-tropical agriculture. The Kolla, that is, the humid and hot region, is suitable for rubber plantations. The cattle industry, which at present lacks the benefits of a systematic and scientific management produces only hides, likewise could become more profitable because sufficient grazing land is available. Although geological exploration in Abyssinia is still in a state of incompleteness, considerable mineral deposits have been located. The mineral resources include gold, silver, platinum, iron, zinc, copper, and coal; yet little or nothing has been done in the way of exploitation. At present, economic importance is attached solely to the small but promising gold and platinum mining industry which rests in the hands of the French. The favorably located hard-coal beds near Lake Tana as well as the soft-coal beds at Debra Libanos, not far from Addis Ababa, also promise profitable returns.

The economic condition and the opportunities for future development in Abyssinia cause the Italians and French to cast covetous eyes at that country from their positions in the desert. Nor is Great Britain averse to securing certain sections for herself. Fortunately for Abyssinia, however, the interests of the neighbors conflict. In the following we shall briefly review these various interests.

The Plateau of Habesh, in the heart of Abyssinia, contains the source of the Sobat, the Blue Nile, and the Atbara rivers, all of which are of decisive importance for the water supply of the Nile. It is the abundance of water furnished by these rivers which renders possible the irrigation of the Nile country, for 95% of the water flowing below the mouth of the Atbara is derived from the Abyssinian Plateau. Deprived of this water supply, the Nile surely would run dry somewhere in the desert. The important dead vegetable matter, which gives the waters of the Nile their high degree of fer-



tility, is washed off the volcanic soil of the Plateau. We may justly claim, therefore, that the Abyssinians are sitting at the sources of Egypt's wealth and, by possessing Lake Tana, hold in their hands the destiny of Egypt.

By dynamiting certain banks of Lake Tana, it is said to be possible to guide the waters of the Blue Nile into Abyssinia and the Danakil Desert. Available maps fail to suggest, however, the procedure and place of executing such a plan. At any rate, the tale that Emperor David II once upon a time had dammed the Blue Nile, was sufficient to induce the British to increase their vigilance over the sources of the Nile. For this reason, the British forced a treaty (15 May 1902) upon the Abyssinians prohibiting the latter from constructing any works which might interfere with the normal flow of the waters toward the Nile. After the World War, Great Britain assumed the right of regulating the water supply of the Nile to suit her needs. In taking a stand against this pretension on the part of Great Britain, Abyssinia was supported by France; moreover, it was with the latter's aid that Ethiopia entered the League of Nations (1923). Notwithstanding all this, Italy and Great Britain concluded a treaty (1925) which once more was really a partition of Abyssinia. With a view to improving the control of the water supply of Blue Nile, Great Britain planned to construct reservoirs at Lake Tana. Any opposition that might arise was to be broken by Italy. In appreciation of this support, Italy was granted the right of constructing a railroad which was to lead from Eritrea straight through Abyssinia to Somaliland. This plan was vetoed, however, by the League of Nations who interceded more in behalf of the interests of France than of the sovereignty of Ethiopia. For, the construction of a railroad by Italy would disregard older rights granted to France; according to the terms of an agreement dated 9 March 1894, France possesses the exclusive right of building railroads in Abyssinia.

On the other hand, a materialization of the accord reached by Great Britain and Italy would not have equalized the conflicting interests of both parties concerned, but rather would have emphasized them. The railroad was to lead from Massaua via Asmara, Gondar, and Addis Ababa to Mogadiscio. Thus not only would there have been established communication between Eritrea and Somaliland that would

be unexposed to exterior influences, but Abyssinian commerce and trade would also have been delivered into the hands of Italy. Yet Italy is less in need of an expansion of her commercial sphere than of an outlet for her ever-increasing population at home. Each year, more than 100,000 Italians are compelled to emigrate because they are unable to earn a living wage in their native land. Naturally, it would be highly desirable for Italy to direct this stream of emigrants to her own territories, especially to such regions, which, if properly exploited, would supply Italy's industry with cotton and such other raw materials as may be produced in the colonies. While both Eritrea and Somaliland, by means of artificial irrigation, may yield richer crops than are produced at present, the climate renders these colonies unsuitable for settlement. The climate of the Abyssinian Plateau, on the other hand, is favorable for Europeans. In this area, there are still available 100,000 square miles of land which, counting an average of nine inhabitants for each square mile, would offer a home and work to many Europeans. Inasmuch as only one-tenth of the soil has been cultivated, Italy would gain an area of cultivable land which measures one-half the size of the mother-country. The railroad would lead to these regions which are most suitable for colonization. On the other hand, this same railroad would also pass through the region containing the sources of the various tributaries of the Nile, thus crossing the sphere of British interests. In order to derive profit from these regions, Italy would have to resort to artificial irrigation. It is questionable, however, whether Great Britain would permit Italy to tap the sources of the Nile, the use of which she denies Abyssinia. This doubt applies likewise, in the event that an Italian armed force should invade Abyssinia. In the same measure Great Britain seeks to dominate all routes that lead from and to India, and claims exclusive control over all waters of the Nile. That Great Britain regards this right very seriously is evidenced by an agreement into which she entered with Italy in 1924. This agreement grants Italy the right to draw a definite quantity of water from the Gash, a tributary of the Atbara, whose source is located on the Plateau of Eritrea, i.e., on Italian soil.

Italy's strategic influence upon the Strait of Bab-el-Mandeb, gained by the Treaty of Rome, would assume still greater importance, if Ethiopia were placed under Italian



rule. For Italy enjoys also a lively economic relationship with Yemen, situated on the other side of the Red Sea. Massaua serves as an important depository for the commerce carried on with that region of Arabia. It is doubtful whether Great Britain would consent to the acquisition of further territory in Abyssinia by Italy which would strengthen the latter's position along the Red Sea and in the Gulf of Aden.

Whereas British and Italian interests in Abyssinia are of a territorial character, those of France are primarily of a commercial one. The railroad Djibouti—Addis Ababa represents the means by which contact with the outside world is maintained. This railroad is controlled by France, which thus handles more than two-thirds of the entire import and export of the country. Owing to the geographical conditions of Ethiopia, Addis Ababa constitutes the political and economic center of the northern and western Plateau. Communication with the south and the highly important region of Harrar is maintained by means of the railroad. Naturally enough, the French seek to retain this economic preponderance which permits, moreover, of a political and cultural influence. It is for this reason that Italy was denied the right of constructing their railroad which undoubtedly would have been of great benefit to the country.

Yet the danger threatening French commerce was not removed by this protest raised against the plan of constructing the railroad. In an agreement dated 2 August 1928, Italy was conceded the right to build an automobile road which was to lead from Assab, on the Red Sea, to Dessie, in the interior of Abyssinia. The Ethiopian government entered into this agreement for the particular reason that Abyssinia was granted a free port zone in Assab which she had been denied in Djibouti. In view of the fact that import and export goods are dutiable in Djibouti, Abyssinia will take advantage of this new outlet once this road has been constructed. Taking this into consideration as well as the fact that French Somaliland, in the main, lives off her trade with Abyssinia, we may assume that a weakening of the Italian position in Abyssinia would be rather desirable for France. Djibouti, however, is not only a port of entry for Abyssinia—this gateway is the French parallel to the British Aden, a factor by means of which British interests may be guided into a channel convenient for France. Hence a strengthening of Italian rule

in this region, might ultimately become highly unsuitable for France.

Ethiopia, weary of the rival pressures exerted by these three European powers, began to seek friendship elsewhere and, in 1933, turned to Japan. The contacts maintained by these two nations are of a far-reaching nature. Japan has gained a concession to establish cotton plantations. For this purpose, as well as with the view to creating settlements, Japan received an area comprising approximately 8,000 square miles. Considering the size of the Empire, this is not a very large area. Moreover, for the present these plantations perhaps are regarded as a mere experiment. Far more important are the plans dealing with the construction of airports, the execution of which Italy has so far been able to prevent. Italy likewise was able to interfere with the proposed marriage of an Abyssinian prince with a lady belonging to the Japanese nobility; this marriage was to sanction the friendly relations established between Ethiopia and Japan. Yet, this diplomatic success on the part of Italy, in no wise altered the fact so highly dangerous for the entire world, namely, that two colored races, one of whom has assumed the position of a world power, have joined hands in their battle against the white race. The situation is as unpleasant for Great Britain as it is for Italy. The latter has to deal not only with Abyssinia but with Japan as well. Italy will have to fight Japan primarily in her struggle for Abyssinian cotton plantations and commerce. The weapons with which to carry out this struggle, however, are not evenly divided. As Italy possesses no favorable roads leading into the interior of Ethiopia, Japan may take advantage of the railroad Djibouti—Addis Ababa. Unlike Italy, Japan need not fear that France might attack her homeland. Besides, France might not even be averse to a friendship maintained between Japan and Abyssinia. At any rate, the relations between Japan and Abyssinia were initiated and fostered with the approval, not to say, aid, of France. Political conditions in Europe, it is true, have reduced the interest of France in Japan. An Ethiopian victory would also be a victory for Japan and, in turn, strengthen the position of France in Europe. In the event of an Italian defeat, Ethiopia and, with her, Japan will advance to the sea and the Strait of Bab-el-Mandeb. The consequent weakening of Italy would tend to increase the influence of France



in the Mediterranean. Far more important than this, however, is the fact that Japan, Great Britain's most dangerous enemy, is in a position to sever in eastern and southern Asia, the life-cord of the British Empire. Abyssinia not only flanks the line: Cairo—Calcutta, but the line: Cape—Cairo as well, which is of equal importance for the British Empire. The constant threat exercised by Japan from the Abyssinian Plateau toward the east and west would tend to curtail Great Britain's freedom of action in Europe, while raising the French position of predominance.

It is shown here for the second time that an Italian rule in Abyssinia would represent the lesser evil so far as Great Britain is concerned. Nevertheless Italy can hardly count on direct British support, because the struggle is directed not only against the Black Empire, but against the Yellow Race as well. Any intervention in Africa on the part of Great Britain which would favor Italy is bound to result in a Japanese advance in Asia. At present, Great Britain cannot afford to risk this danger. Hence, unless Italy should prefer a settlement reached by peaceful means, she will be left alone in her conflict with Ethiopia.

From the above we may conclude that Abyssinia constitutes one of the most important centers upon which the foreign policies of the four world powers are focused. It is to these contradictory policies that Abyssinia owed her existence and independence during the past four decades. Up to the present, Ethiopia has profited from the rivaling ambitions of her neighbors. The question, however, is whether Ethiopia today, as in 1896, is able to protect her freedom without receiving the support of other countries.

It seems almost as if the victory of Adowa had established once and for all that the people of Ethiopia will never be vanquished. One cannot deny that, on 1 March 1896, an army composed of white troops was annihilated by a colored mob—for, Menelik's forces could not be called by any other name. Nor can it be denied that on that day the latest developments in the military field were defeated by the all-conquering force of a bold and determined attack executed by savages. And yet, one should not commit the common error of concluding from this fact that Ethiopia is superior in the art of warfare. Notwithstanding the victory, the Battle of Adowa does not represent a reliable unit by which to measure the

military efficiency of that nation, for a series of misinterpreted orders caused the Italian troops to disperse and march straight into the trap laid by the enemy. The latter had only to attack in order to wipe out one unit after another. On the other hand, the Abyssinians encountered obstinate resistance wherever the Italian troops were led by an energetic commander. This is proved by the exploits of Dabormida's gallant brigade which launched six successive bayonet attacks and repulsed the Ethiopians in each instance. Nor is it an example of military superiority that on the Colle-Zala some 5,000 Abyssinians were contained by 120 Italian infantrymen and 115 Bersaglieris. Then, too, the initial engagements that took place at Coatit, Senafe, and Dobra-Ailat were unfavorable for Ethiopia. It is essential to recall these episodes in order to be able to arrive at a correct estimate of the coming events.

Information available regarding the Ethiopian army is inaccurate and contradictory. Estimates as to the strength vary from 500,000 men to 1,000,000 men. The equipment with modern arms in no wise corresponds to the number of soldiers. Recent illustrations showing the Ethiopian army failed to furnish a correct picture of the actual armament. At the beginning of the strained relations with Italy, the Ethiopian forces possessed from 200 to 300 machine guns besides the rifles carried by every Regular soldier. The artillery numbered 180 mountain guns (caliber 55-mm.). Considerable changes have been made since, but have not been published to the world. The supply of the necessary ammunition is a highly serious problem for Ethiopia. The small factory in Addis Ababa produces only rifle ammunition and cannot ever cover the demand for this type. As far as is known, there are no factories for the manufacture of artillery ammunition. No information is available as regards the number of tanks or armored cars and airplanes on hand. Yet, it may be advisable to be prepared for surprises with respect to aerial warfare. At any rate, in April, 1934, General Virgen, the former Chief of the Swedish Air Service, and several other Swedish officers were called to Abyssinia. General Virgen is said to serve merely in the capacity of "advisor in matters of general interest," especially in matters dealing with the improvement of the roads and the communications system. In other words, Ethiopia is employing an Air Gen-



eral as a road builder. The airports, which Japan had planned to construct but failed to materialize due to Italian interference, surely were not intended solely for commercial traffic. For, traffic in Ethiopia is not so great as to justify air lines.

Whether the interior organization of the Ethiopian army was changed by the foreign officers (Swedish as well as Belgian) who were entrusted with the training of the men, is not known. Nevertheless, one may be justified in assuming that the standing army now, as during Menelik's reign, is ready to take the field at a few hours' notice. Placed under the direct command of the Emperor and equipped with modern arms, this Regular Army numbers approximately 100,000 professional soldiers. These men are called "Wotates." The Regular Army is distributed throughout the Empire, with the strongest garrisons being established in the newly subjugated provinces of the south. In addition to this force, Ethiopia has at her disposal a great number of soldiers who are following their vocation in civil life, but may be called upon for active service in time of war. These troops carry the name of "Gintiwell" and may be compared with our second line of defense. Whether they are required to participate in maneuvers, is not known. Previously, maneuvers were held only at the threat of war. This militia is not so well equipped and is commanded by the Governors of the various provinces. Finally, there exists a second category of Reserves which, however, is called to the colors only in extreme emergencies. These Regular soldiers are supplemented by native tribesmen armed only with the spear and knife. The various tribes are led by their own chieftains. On the other hand, the primitive armament possessed by these tribes should not cause us to underestimate their fighting value. Familiar with the terrain, both its advantages and disadvantages, the natives are able to secrete themselves about the terrain and thus inflict considerable losses on the enemy. These elements are employed primarily for the purpose of interfering with the hostile lines of communication. The fact that the appearance of this soldiery does not differ from that of the civilian population, renders it especially suitable for such employment.

Whereas, the arms for the Reserve units are stored in government arsenals, several tribes of a high caste, which live near the southern frontier, have the privilege of providing their own arms. Although the rifles are furnished by the

government, they become the property of the bearer. Under certain circumstances, this may result in a reduction of the fighting strength; for, these particular tribes are not very reliable.

The right of maintaining a bodyguard is granted not only the Emperor, but all principal commanders and chiefs as well. This bodyguard is provisioned and sheltered by its respective chieftain. The strength of the bodyguard does not depend alone on the rank, but on the financial condition of the respective chief as well.

On the march, Ethiopian troops are accompanied by an enormous retinue. Each soldier has his arm bearer—a boy from twelve to fifteen years old—and all married men take with them into the field their entire families. In addition there are servants, water bearers and bread bearers. Unless tactics have been changed, the entire force remains concentrated in one bivouac during a halt, thus offering an excellent target for airplanes.

The mobilization is not concluded, however, with the concentration and equipment of the civilian contingents. The Governors of the individual provinces are required to store sufficient food supplies in the depots, which are called "Gottaro," to satisfy the needs of the troops on the march. This is necessary in view of the fact that the districts included in the war zone, wherever they may be, are not in a position, themselves, to provision the army. Moreover, the service of supplies does not always function properly because of difficult road conditions.

While the training and armament of the average Ethiopian warrior, with the exception of the "Wotates," may be lacking in many respects, his soldierly qualities are great. The Abyssinian esteems the profession of arms the only occupation becoming a man. Hence the soldier ranks highly among his fellow countrymen and he, in turn, is zealous in his efforts to be efficient and brave so as to show himself worthy of this respect. He is a soldier from head to foot. Schooled by nature, and thoroughly familiar with the open field, the Ethiopian is very adept in taking advantage of the terrain. Furthermore, he is said to be fearless, moderate in his wants, and enduring. For hours he will push on at the double regardless of the heat of the day, and a short rest will suffice him to gather the necessary strength for enduring



the same exertions the following day. Average marches of 30 to 35 miles are no exceptions. The army possesses far greater mobility than the excessive number of camp followers may lead us to believe. Moreover, the rate of march is astonishing because an actual march discipline barely exists and the condition of the terrain generally permits only the single file march. Despite the fact that the army in general is inadequately armed and trained, its natural fighting strength is considerable. For generations, only the offensive spirit has been developed in the ranks of the Ethiopian army.

In estimating the fighting value of the Ethiopian army, there exists one factor, however, that must not be overlooked. The population does not constitute a racial unity. The real masters of Abyssinia are the Amhars, whose number is estimated at three and one-half millions. Though inhabiting the Plateau in the north, they are represented in every town as officials and soldiers. The south and southwest are populated by the Galla, who number four million. The territory extending to the coast of the Red Sea and the Indian Ocean is settled by the Danakil and their kinsmen, the Somali, who comprise a total of one million. Finally, the region of Lake Rudolf and the adjoining districts of the Galla are inhabited by one and one-half million Negroes. Numerically, the ruling race comprises only one-third of the entire population.

This racial division is further complicated by the religious differences. Whereas the Abyssinians adhere to some primitive form of Christianity, most of the remaining races are Islamites. The mutual dislike of the Christian and the Mohammedan, which is especially apparent in the Orient, is aggravated here by the difference existing between the ruling and subjected tribes. The Abyssinians have failed to gain the friendship of the population of the districts they conquered several decades ago. Not only have the Abyssinians placed the yoke upon the subjugated tribes, but they exploit these people to an extent bordering on slavery. It is this fact which Italy is now using for the purpose of justifying her policy of aggression.

There is no doubt that the efficiency of the army is greatly reduced by this racial and religious difference, and that the reliability of the Galla and Samoli tribes is not assured because of the dictatorial methods employed by the Abyssinians. On the other hand, we should not conclude, off hand, that this

represents an advantage for Italy. For the contrast between Christian and Mohammedan exists also with respect to the Italians. Nor should we forget that the employment of colored troops in the World War as well as the quite active Communist agitation has aroused Africa. The hostility toward Europe is increasing and it may be assumed that the Ethiopian population, even though divided both racially and religiously, will unite for a common struggle against the white powers. This constitutes a considerable threat for Italy. True, the native troops from Eritrea and Somaliland fully showed their mettle during the conquest of Tripoli. However, it is doubtful whether they will prove just as reliable in a conflict against the Ethiopians to whom they are racially bound. At any rate, the native troops were highly unreliable during the campaign of 1896. The revolt led by the allied Ras Sebat and Agos Tafari, with their Abyssinian troops, was a sign for the other natives to mutiny; these insurrections became more and more frequent and were never wholly suppressed. The unreliability of the colored troops is a factor of great importance; for the employment of European troops on the Plateau, where roads and water are scarce, is rendered difficult and necessitates great expenditures and efforts. The smaller the number of colored troops placed in the field, the greater must be that of white troops, and the more difficult will be the supply problem. It is so difficult to supply with the barest needs in matériel and food, European troops that are located far away from their base, between mountains and on narrow roads, that an increase of the combat forces beyond a certain limit is not only useless but dangerous.

The employment of native troops has still further disadvantages. The similarity in appearance of the population residing on either side of the frontiers greatly interfered with the defensive action during the retreat from Adowa. The Italian troops were unable to distinguish friend from foe and had to be extremely careful in selecting their targets. Meanwhile, the Italian native troops have been uniformed, so as to forestall mistakes. This advantage, however, was gained at the cost of their fighting value; for the uniformed natives, despite all camouflage, are far more easily visible in the clear and transparent air than the brown figures of the Ethiopians who can hardly be distinguished from the terrain.



The political entity of Ethiopia is the work of Menelik II but he was able to complete this feat only after engaging in serious conflicts with the native chiefs and governors that had risen in revolt. However, when years of illness prevented Negus Negesti from exercising his rule, it became evident that the ties uniting the various tribes were rather loose. After Menelik's death, conditions gradually became worse and regular civil war ensued in 1916 against the then Emperor Lidj Yassu. True, this revolt was instigated by the Entente Powers because of the Emperor's sympathy for Germany. Nevertheless, this revolt goes to prove that the individual chiefs are not yet resigned to a centralized rule as designed by Menelik. Political friction within Ethiopia has not been reduced to date. Though kept a prisoner by the present Emperor Haile Selassie, Lidj Yassu still has a considerable following in the country; this is due particularly to the fact that Selassie, according to the Abyssinian law of succession, has no legitimate claim to the throne. Besides Yassu, there are still other pretenders to the throne, who base their rights on their relationship with Menelik's predecessor, Emperor John II. This dynastic friction must not be dismissed lightly; for each chieftain and all nobles have at their disposal a considerable military guard. In other words, political ambitions are supported by a certain degree of armed strength. Up to the present, however, the modern history of Abyssinia has always shown that the political differences, which simultaneously represent disputes between the individual chiefs and governors, will disappear at the sight of a common threat. In the past, the various tribes have never failed to rally in defense against foreign attacks aimed at the independence and freedom of their country.

It is extremely difficult, therefore, to gain a true estimate of the fighting strength of Ethiopia. This much is certain, however, a campaign launched against the war-tried Ethiopians even today would be anything but a military excursion. Then, too, the geography of Ethiopia offers considerable natural protection.

The topographic characteristics of the Ethiopian Empire are no more uniform than the racial ones. The Plateau of Habesh represents a natural fortress and is excellently suited for defensive action; at the foot of this Plateau, there are located in the east the Danakil Basin and in the southeast

the Somali Plateau. These latter regions and the colonies of the European nations situated along the coast form a geographical unit. It will be necessary to cross these regions in order to strike at the heart of Ethiopia. Italy, on the other hand, is at an advantage inasmuch as Italian Eritrea extends well onto the Abyssinian Plateau in the north.

This Plateau serves as a national barrier against an invasion and will cause an aggressor endless difficulties. Wall-like precipices border on the surrounding country with a lower elevation. In the east, the edge of the Plateau is steep and without any passes, and reaches an elevation of 2,700 yards. While, in the south and southeast, the decline likewise is steep, it is less abrupt and less uniform. Here, the valley of the Awash, which prescribes the course of the railroad, permits an entry into the interior without offering excessive difficulties. The western edge of the Plateau is not so uniform in elevation nor so outlined. The numerous rivers, which here flow toward the Nile and its tributaries, have dug a number of natural openings in the mountain wall. It would be a mistake, however, to assume from this that traffic conditions are better in the west than elsewhere. Here, as throughout the country, the valleys constitute deep and abrupt incisions in the terrain. Valleys with a sheer drop of 1,000 yards are no exceptions. Moreover, the course followed by these valleys is very irregular, so that hostile forces may easily be captured should they be able to enter the valleys at all. These canyon-like valleys also render difficult traffic on the Plateau. There are no bridges crossing these valleys, and it is impossible to descend into them without resorting to detours. On the other hand, such topographic features tend to favor enveloping movements and covered approaches to within close proximity of the enemy. This is all the more notable since the Abyssinian is an expert mountain climber and no road is too bad nor any elevation too great for him. Ethiopian troops may, therefore, negotiate precipices that are hardly accessible to European troops.

Above this Plateau, there rises the Ambas, a number of mesas which constitute individual fortresses similar to that formed by the country as a whole. The deeply carved terrain offers a difficult zone of operations. While only a few places and only a limited number of accessible roads require defending, the incisions in the terrain interfere tremendously with



the maintenance of liaison between the forces in the field and greatly obstruct the range of view. This same terrain, however, permits the defending forces, who are familiar with all its hiding places, to reconnoiter and keep well posted on the movements and disposition of the enemy.

The poor vision offered by the terrain is further reduced by the brush-like vegetation. Thorny desert shrub, growing in patches or in large thickets, cover the entire country. These "thorn fortresses" obstruct one's movement as well as one's range of view, while offering the natives welcome hiding places and protection.

The disadvantages of the terrain and its advantages for the defender are best illustrated by an episode of the retreat of Major Toselli from Amba Aladji to Antalö (7-8 December 1895). The withdrawal had to be accomplished over a narrow path, on one side of which there was an abyss 400 yards deep; while on the other side steep rocks rose high in the air. These rocks were occupied by Abyssinians who would fire into the defenseless column from a distance of 50 paces. The Italian detachment, composed of 1800 natives, was practically annihilated. Major Toselli and all other officers were killed.

Finally, the Plateau in its extension possesses a defensive factor which should not be underestimated. While the greatest distance from north to south measures 938 miles, the maximum interval between the foot of the Plateau in the west and in the east measures 325 miles. These distances gain all the more in importance since technical implements are of little avail in this terrain. This applies equally to friend and foe. On account of the size of the country, the Ethiopians may avoid an enemy by evacuating certain districts, without decreasing their defensive power in any way. The vast extent of the territory and the fact that it is thinly populated furthermore permit the Ethiopians to draw an opponent far into the country until he has reached a point where he may be attacked. Both the extent of the terrain and the fact that the Ethiopian troops are familiar with its characteristics, finally favor a demoralizing guerrilla warfare. The size of the country makes it also impossible to subdue Ethiopia by starvation. The frontiers are so long and so difficult to guard that it is simply impracticable for a hostile army, which is bound to remain small, to cover their entire

extent. Regardless of the difficulties, there will always be some hold through which munitions and other matériel may be imported.

Italy by no means underestimates these difficulties. During the frequent meetings of the Supreme Defense Council, the General Staff in February of this year emphasized that it would require 30 years to execute military operations on a large scale and definitely establish peace in the country, that is, to quell the revolts that must be expected.

Massaua, Assab, Djibouti, and Mogadiscio will be the bases for the attack directed against Ethiopia. Djibouti undoubtedly is the most valuable of these points, because it is from here that the only available railroad leads into the interior of the Plateau. France will hardly place this railroad at the disposal of anyone but Abyssinia; for, as we already know, she is greatly interested in maintaining commercial relations with the Empire. Although, since the Treaty of Rome, Italy has gained some influence over this railroad by taking over a number of shares, she may exercise this influence only with the consent of France, owing to the fact that she has no direct access to the railroad.

Another railroad leads toward Ethiopia from Massaua. After passing through Asmara, this road turns northwestward in the direction of Cheren, that is, it moves farther away from the Ethiopian frontier. Communication with Ethiopia is maintained by three automobile roads, two of which emanate from Asmara. Yet these roads end shortly before reaching the frontier.

Italy is planning an automobile road that will lead from Assab to the interior of Abyssinia; the actual construction, however, has as yet not begun. Nevertheless, there are indications that Italy is seriously thinking of improving the roads which connect Italian territory with Ethiopia. At any rate, the Press reports that laborers have been sent to Eritrea and Somaliland for the purpose of constructing roads. Mogadiscio is the final base of operations. A railroad leads from this seaport to Lugh, on the Giuba river. It is not known whether this railroad has been completed. Another lane of communication is the Giuba river which, for several months of the year, is navigable as far as Bardera.

From a topographic point of view, Massaua may be considered the best base of operations because the Plateau



may easily be invaded from that direction. On the other hand, Italian colonization in recent years, had advanced also toward the Abyssinian frontier with the result that the communication system today is far better than the one which Baratieri had at his disposal forty years ago. At the frontier, however, difficulties arise. It is here that the mountains of the Tigre region rise out of the plain and form a chain of frontier guardians that may be hard to overcome. While vast and undulating plains, interspersed by long and flat-backed mountain ranges are the characteristics of the Plateau on the Italian side of the frontier, the gently sloping terrain disappears entirely on the Abyssinian side. Enormous sections of mountain ranges, with jagged and abrupt ridges and with deep and narrow gorges, render movements difficult. To the defender, who is well acquainted with the nature of the country, they offer excellent positions and opportunities to ambush the enemy.

The great difficulties that will have to be surmounted are exemplified by the British punitive expedition directed against Emperor Theodoros II. A distance of 650 kilometers had to be covered in marching from Zula, the point of disembarkation, to the Abyssinian fortress of Magdala. Although this march was accomplished without enemy interference, it nevertheless required the British troops from 2 December 1867, to 7 April of the following year to complete it. It should be noted, however, that this was a case of an advance made through a terrain that was completely unknown, which naturally tended to diminish the rate of advance. Another example of the slow rate of advance, usual in Ethiopia, is furnished by the march undertaken by Baratieri who, in 1896, operated in these same regions. He expected to accomplish the 8-mile night march to the battlefield of Adowa in eight hours. Actually, however, he covered only a distance of about 1500 yards per hour.

Nor will an advance made from the base of operations Massaua—Asmara strike objectives of strategic importance within a reasonable distance. The holy city of Adowa as well as the old crown city of Gondar, which will be first to obstruct an advance, are no more important than any other town. There is only one objective, the occupation of which will be of decisive importance, namely, the city of Addis Ababa, with its railroad. At first glance, it seems as if this

city may be easily reached from Assab. Not only is this seaport situated nearer the railroad, but there are no mountains to obstruct an advance. And yet, Assab cannot be considered a base of operations; for the road leads through the hot and arid Danakil Desert, which, except by means of an improved road, can hardly be traversed even by a motorized army. Furthermore, the zone of communication along this line will be exposed to harassing attacks of the savage Danakil tribe. An advance staged due west is entirely out of the question; such a movement would founder on the high and steep mountain wall which positively separates the Plateau from the plains.

The assault against the railroad line may be executed from a southerly direction, using Mogadiscio and Lugh as bases of operations. Yet this would require a march of 600 kilometers of arid country, with the movements becoming more and more difficult as the advance progresses toward the north.

Situated far away from the sea and separated from the coast by desert country, the topography and vastness of the Abyssinian Plateau make a fortress which would be difficult to capture. Even though an invader should succeed in reaching the foot of the mountains or even the top of the Plateau, little would be gained. On the contrary, the situation of the invading force would become more and more difficult the farther it moved away from the coast and its ports.

However promising Abyssinia may be from an economic point of view, at present she offers nothing that could tend to facilitate the operations of a European military force. As has been noted above, supplies are stored in the government depots when war is imminent, in order to assure the supply of the army. In other words, the country will be bare of food supplies; while the storing of supplies in a limited number of places will permit of their being destroyed in the event of a withdrawal. Hence the invader must always be prepared to enter a country where he may find no support whatever. Yet, disregarding a destruction of supplies, at present the country is in no position to furnish provisions for anyone but her own population. For this reason, all supplies for an expeditionary force must be shipped from the mother country.



The fact that European armies would be dependent on their mother country for supplies is perhaps Ethiopia's strongest weapon. The least interference with the service of supply will cause repercussions at the front. Thus Baratieri's advance to the battlefield of Adowa was greatly handicapped by the shortage of food supplies, which increased from day to day. These difficulties, on the other hand, could have been avoided far more easily by withdrawing to a safe base where food supplies could have been drawn. Yet a retrograde movement was bound to impair the spirit of Baratieri's forces, and so he decided in favor of the advance. Baratieri believed, by moving nearer to the road: Adowa—Gundet—Asmara, he would improve and protect his communications and thus eliminate the difficulties encountered in providing food supplies.

The Italians were not entirely without blame for the failure of the rearward communications. The service of supply did not function because of its poor organization and because the officers showed little appreciation for this branch of the service. Yet even the best organization cannot surmount the natural and climatic difficulties; it is due to the latter that uninterrupted functioning of the zone of communications cannot be maintained the year round and continuous warfare is impracticable.

In accordance with the monsoon-like change of the air currents, rains recur at regular intervals. The rainy season is sharply divided from the dry season. The former commences in May and lasts until late September, reaching its height during the months of July and August. It is during these months that fifty percent of the entire precipitation takes place. Ordinarily, it rains only during the afternoons; while in July and August it rains also during the night. In those months downpours lasting all day are no exceptions. Generally they are accompanied by heavy thunder storms. Addis Ababa, for instance, has registered as many as 112 thunder storms in the course of 148 days of rain.

The streams cannot always hold the sudden downpours, and floods are a frequent occurrence. Softened by the rains and the waters of the raging streams, the roads become impassable and wide stretches of land are changed into large lakes. Yet, even in sections with sufficient drainage, traffic is blocked by the rain. The rivers in general have no bridges, but in the dry season carry only little water and

may be waded. During the rainy months, these same rivers change into wild rapids which form an unsurpassable barrier. Hence we may conclude that all traffic stops during July and August and that communication is maintained only under difficulties during the months of May, June and September. In other words, military operations may be carried out only during the period beginning October and ending no later than April. Unless the outcome of the operations has been decided during this period, the foreign forces must withdraw because it will be impossible to bring up the necessary supplies after that time. No matter how many reserves in men and matériel a modern army may carry along, an expeditionary force cannot entirely, or for a long period of time, dispense with its contact with the mother country.

As the excessive water interferes with the operations during the rainy season finally rendering them impracticable, the lack of water during the dry season also has a far-reaching effect. There are no cisterns along the roads, so that the danger of running out of water prevails wherever there is no natural water supply. It was this latter reason which kept the Abyssinians, with their entire army, from following on the heels of the Italian troops and driving them into the Red Sea subsequent to the Battle of Adowa. Menelik, himself, stated that the extreme lack of water, which was bound to become worse during the months preceding the rainy season, prevented him from so doing. Another example due to the lack of water was the capitulation of Fort Makale, under Major Galliano (29 January 1896). This water shortage becomes all the more serious because it will retard the movement of supplies; for the number of pack animals depends on the supply of water available.

Irrespective of the irregularities and difficulties encountered in communicating with the rear, due to climatic conditions, the maintenance of the service of supply will always be a difficult problem. The distances from coast to plateau are considerable; between 500 and 600 kilometers of the route lead the troops through desert-like country. This extremely long march will necessitate not only a corresponding complement of vehicles, but, in view of the lack of intelligence available regarding the enemy's disposition, will require also strong covering detachments.



Let us assume that the distance from the coast to the foot of the plateau may be covered by means of specially constructed motor vehicles. Yet, once the plateau is reached, everything must be carried now, as centuries ago, on the backs of horses, donkeys, mules and camels or on the heads of native carriers. There exist, in addition to the railroad, a few modern roads that must be used by motor vehicles. The majority of these roads are located, however, in the vicinity of Addis Ababa, so that they represent little aid for the military operations of an invader. Whatever other roads exist, they actually are mere caravan paths. The Ethiopian government has done nothing in the way of improving them. Maintenance work is unknown, and these paths are full of rocks, so that pack animals will quickly tire. In many cases the paths wind their way through the thick brush, making it impossible to assume a broad march formation and forcing the columns to march in great depth. This likewise applies to the narrow valleys. Frequently the drop is so steep that the animals loaded down with their packs have to jump across the narrow gorge.

Bridges are scarce. Except the bridge across the Awash, which the natives regard as a world wonder, there is not a single bridge in the entire country strong enough to meet the demands of modern traffic. Most rivers have to be forded; this is safest even where there is a bridge.

In addition to the difficulties of terrain, there are organizational ones. When the British, in 1867, launched a punitive expedition against Theodoros II, they assigned one pack animal for every man and one native carrier for every two men. If pack animals are to be used exclusively, five animals for every four men may be considered a fair estimate. Assuming the load carried on the mule to weigh between 130 and 220 pounds, the number of pack animals and necessary material at first glance seems rather high. Yet, the estimate may be appropriate; for it is not only the front which will have to be supplied, but in view of the complete bareness of the country, the pack trains will have to carry their own forage, provisions, and whatever else they may need, including water. Thus the load actually carried for the combat troops is decreased by the weight of the supplies required for the trains themselves. Indeed, the supplies to be carried for the use of the trains will be considerable, because mobility in this difficult

terrain is slow and travel requires much time. In order not to overburden the animals, trains ordinarily march from four to five hours a day. The rest of the day the animals graze on pasture land.

The great number of mules required by European troops are not only difficult to obtain, but are still more difficult to maintain. Imported from foreign countries, the animals are unaccustomed to the poor quality of the forage, hence are not as strong as they should be. Furthermore, they suffer from the climate, especially from the severe cold of the nights. The thin mountain air affects the animals as it does human beings. Mules imported from Italy, therefore, have shown a high death rate.

The experiences of the Eritrea—Abyssinian campaign proved that, owing to the difficulties encountered by the service of supply, large European armies cannot be maintained in Abyssinia. These experiences should hold true even today, since there has been no change in the underlying courses on which they are based. Hence, European powers must oppose Ethiopia with a numerically inferior force, unless they wish to place in the field a large army of colored troops. While the latter are easier to maintain, they are not dependable.

A war in Abyssinia can be fought successfully only by cutting off the country from all imports, with particular regard to the import of war materials. Inasmuch as the colonial powers begrudge each other the possession of Ethiopia, it is hardly probable that they will support the invader by closing the frontiers. Moreover, the munitions industry is anxious to make money. According to recent reports, Sweden—regardless of the attitude of the Great Powers—will permit the shipment of arms to Ethiopia. The invader, therefore, will have to guard the frontiers or intercept the few lanes of communication in existence. The former of these two tasks can be accomplished only by using a large military force; such a force cannot be made available, however, owing to the supply difficulties. The second task is no less difficult to solve. The principal traffic lanes are situated in the center of the country and may be reached only after traversing an enormous expanse of unfavorable terrain. It is for this reason that the air service might play a decisive role in carrying out the mission of intercepting the lanes of communication.



The numerical inferiority of a European expeditionary force has still further disadvantages. The past forty years surely did not go by without some improvements having been made in the equipment and training of the Ethiopian army, though Ethiopia's military force cannot be compared with modern troops. And yet, both are of equal value; for, the European forces will find no opportunity to employ their modern weapons—except airplanes. Notwithstanding their capacity for moving across country, the employment of tanks and armored cars is entirely out of the question. Modern fire arms, with the greatest value in their high rate of fire, cannot be effectively used, because the pack trains will be unable to supply the front quickly enough with the necessary ammunition.

Judging by reports published in the Italian press, the air service is to play a decisive role in an Ethiopian campaign. There is talk of sending to Africa 300 airplanes and 1500 pilots. Mention is made also of the aerial maneuvers of 1934; the principal object of these maneuvers was to observe and combat an enemy widely dispersed over a closed terrain, as well as to carry provisions to advanced detachments. Field Marshal Balbo, the creator of the Italian air fleet, is said to have trained his air squadrons in Libya in carrying on operations and moving supplies in desert country. These maneuvers undoubtedly were held with a view to eventual operations in Abyssinia. Whether the aerial weapon will come up to expectation remains to be seen.

It should be noted that the brush, the shadows cast by the many hills, and the rocks tend completely to hide the soldier on the ground. While airplanes may be effective in direct action, they will just as often be useless. With the exception of the supply trains, airplanes will find few targets behind the front. Bridges cannot be bombed, for the simple reason that there are no bridges; and road intersections are of no value in a country whose inhabitants never have seen real roads. The only object which may be destroyed is the railroad: Addis Ababa—Djibouti. We may add that the Abyssinian soldier is less dependent on a service of supply than his European opponent. Finally, airplanes may destroy buildings. Yet this would have little effect on the morale of the population. Semi-barbarians do not differentiate between combatant and non-combatant. To them, an enemy is an

enemy, regardless of whether the same carries a weapon or not. It is not at all unusual for the Abyssinians to destroy their enemy's towns and thus inflict heavy losses upon them. True, airplane attacks might strike terror into the hearts of the natives. And yet, Ethiopia herself having acquired a small air fleet, the sight of these gigantic birds should no longer be unfamiliar to the Abyssinians.

On the other hand, the importance of the airplane in one respect is considerable and must not be underestimated. The air service may lend valuable assistance to the service of supply. How strong an air service will be needed, and whether it will be practicable to supply the entire expeditionary force by air, are problems that are difficult to foresee. In view of the fact that Ethiopia possesses only few anti-aircraft weapons, the advantage in this respect lies on the side of the European nations. Nevertheless it should be repeated that the topographic character of Ethiopia furnishes this country a protection which defeats modern armament. Ethiopia, therefore, has certain advantages over any European army; and she may rely upon these advantages during her present conflict with Italy.

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## AIRCRAFT AND COMBAT VEHICLES VERSUS GROUND TROOPS

By Major F. During, Infantry

### EFFECT OF AVIATION AND COMBAT VEHICLES ON GROUND TROOPS

At the close of the World War aviation played a relatively important role in combat against ground troops. Its development did not come to a standstill, as all countries, having realized from experience the importance of the new arm, energetically pushed forward its development and improvement.

Ground troops are principally attacked by attack planes and light bombers. In some armies both missions are carried out by the same type of planes which are equipped with machine guns, bombs, chemical agents or incendiary bombs.

A plane can carry 800 to 1,000 pounds of bombs. The most effective bombs against infantry are considered to be

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Abstracted from *Voina i Revolutsia*, May-June 1934. Article by I. Tkatchev.