

## Alpine Invasion Routes from Italy

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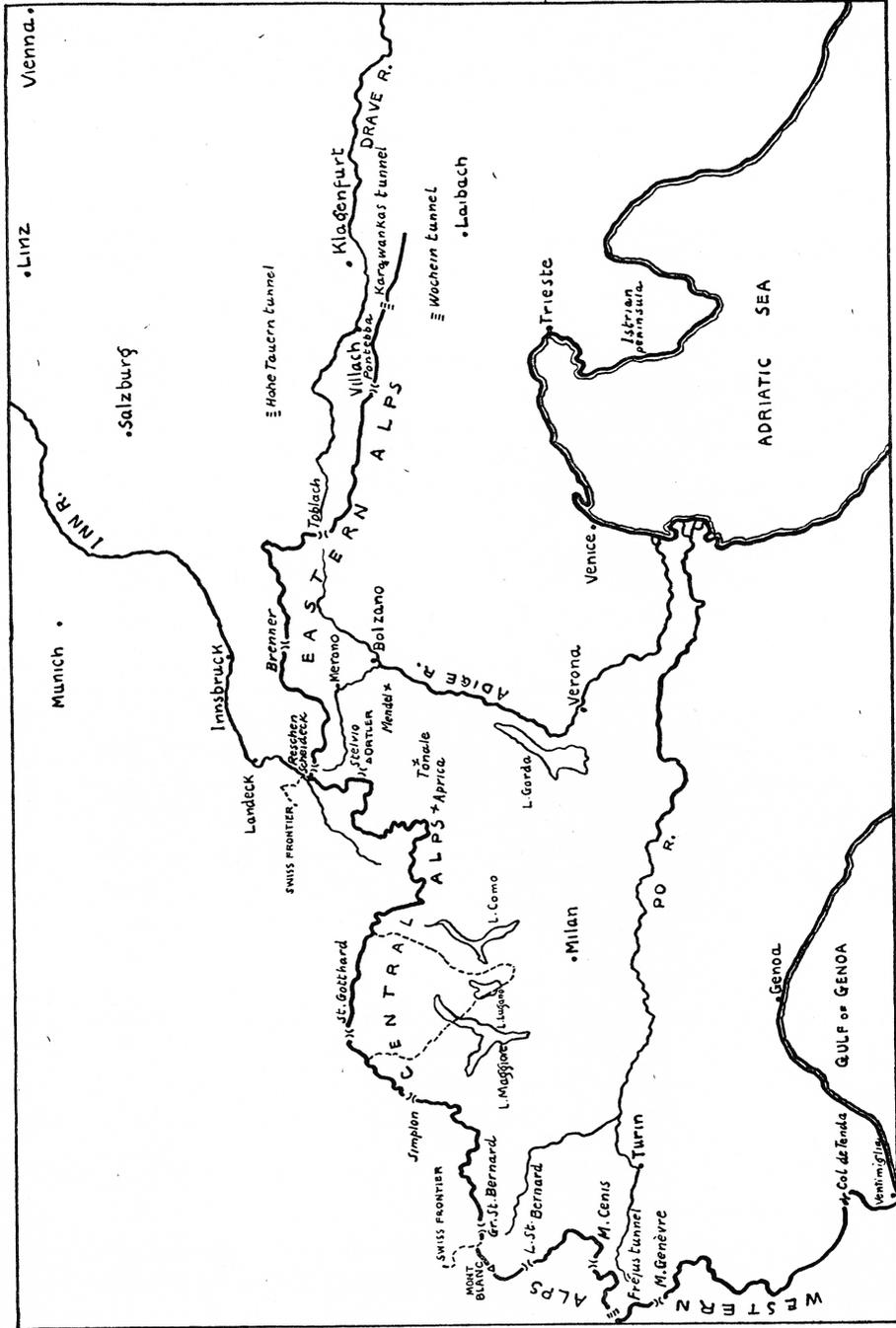
THE Alps form the arc of Italy's northern frontier from the sea at Ventimiglia to the head of the Adriatic. Milan is the hub for passes leading from the Po headwaters to France; Verona is the key-city for the Brenner road, while Trieste is the rail-head of the route to Vienna. From Milan cathedral, on an exceptionally clear day, *Baedeker* states that in the semicircle of Alps the following are visible: Monte Viso, Mont Cenis, Mont Blanc, Great St. Bernard, Monte Rosa, Monte Leone (Simplon) and Ortler. All of these points are within a radius of 120 miles.

Following the successful termination of the Sicilian campaign, the Allies have invaded the Italian mainland. Their bombing of Turin and Milan interrupted the flow of matériel through three important Alpine tunnels: the Fréjus in the Western Alps, and the Simplon and St. Gotthard across the Central Alps, the first of these crossing the French frontier and the last two being Swiss. Air attack has also been made against the rail routes of the Eastern Alps, particularly on the vulnerable bridges of the Brenner road.

Let us suppose the Allies to be in possession of Italian territory S. of the Po River. In what direction will further moves take place? Should this become the long-awaited second front, the neutral block of Switzerland becomes a bulwark behind which the Germans stand, and which presumably will divert our forces to the W. or E. Our strategists must wish at times that Europe's mountain republic were as far to one side as Portugal. A direct line from Milan through central Switzerland will continue down the Rhine Valley to Cologne, while radii from Milan to Berlin or Munich touch little of Swiss possessions except the Bernina projection. But military routes seldom follow straight lines.

Since the time of Hannibal, routes of invasion, with few exceptions, have led to and not from Italy. In the present war it was the fall of France and not Italian initiative which allowed Axis domination of the passes of the Western Alps.

The Western Alps extend from the Mediterranean coastal railroad and the Col de Tenda, N.E. of Nice, to the Simplon Pass. From the headwaters of the Po, passes lead across the French por-



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tion of the arc to branches of the Rhone—the Durance and the Isère—which were the old invasion routes from Gaul to Italy. The Mont Genève, a great pass of classical antiquity, joining Turin and Susa with Briançon, was probably Hannibal's route in 218 B.C., although the question will not be settled until someone discovers Punic armor; and it was without doubt traversed by Caesar for the conquest of Gaul in 58 B.C. It may have been Charlemagne's course to Lombardy in 774.

The Mont Cenis Pass, leading from Susa, where it diverges from the Mont Genève road, to Lanslebourg and Grenoble, was crossed by Pippin in 756, but it has no important military history; nor does the Little St. Bernard (Aosta to Grenoble), with the exception of Caesar's journey from Gaul to Rome in 49 B.C. Even the carriage road was not finished until about 1871.

Without mentioning minor passes across which only task forces could operate, these are the principal military routes across the Western Alps from Italy to France. The modern road across the Mont Genève was completed in 1806, while the Fréjus tunnel (Turin to Modane), 17 miles W. of the Mont Cenis, was pierced in 1871, the first rail tunnel under the Alps. As Coolidge<sup>1</sup> says, "the medieval Mont Cenis finally beat the Roman Mont Genève" because of the single valley leading straight up from the plains on the W.

As we follow the mountain arc, the chain of Mont Blanc now raises its formidable barrier, and the Great St. Bernard Pass, although belonging to the Western Alps, crosses the Swiss frontier and hence will scarcely be an Allied objective. This pass, on which a hospice probably existed as early as 859, is associated with the famous crossing of Napoleon in 1800.

The passes of the Central Alps, those between the Simplon and the Stelvio, were not in common use until the Middle Ages, by which time, however, the now seldom used Septimer Pass, connecting the Hinter-Rhein Valley with the Lake of Como, had become the principal route from Germany (Augsburg) to Italy (Milan). Even the St. Gotthard, prior to the completion of the tunnel, was so unfrequented because of its narrow gorges of ap-

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<sup>1</sup>W. A. B. Coolidge, *The Alps in Nature and History*. The reader is referred to this work for its greater detail and excellent diagram maps, and also to an article, "The Division of the Alps into Regions" (*G. J.* lxxi, 37), by D. W. Freshfield.

proach that it has no military history of note antedating the Russian operations, under Suvarov, against the French in 1799.

The Simplon and St. Gotthard Passes, whose tunnels were opened to traffic respectively in 1906 and 1882, are the most important across the Swiss-Italian frontier, but are not expected to be involved in Allied invasion. In any case, the tunnels will be controlled by the holder of the converging rail routes between the lakes of Maggiore and Lugano. Actually the St. Gotthard summit and the tunnel itself are well within Switzerland, this portion of the Lepontine chain being N. of the border. Here one may note that the Swiss by ancient conquest hold a triangle of territory, Canton Ticino, across the St. Gotthard, S. of the Alps, with its southern apex on Lake Lugano. Coolidge again reminds us that the Roman Great St. Bernard was favored over the medieval Simplon until the latter was crossed by a highway, and that the St. Gotthard and Septimer became the important routes over the Central Alps when the latter mountains became better known.

Thus, invasion routes from the Italian plain must strike either to the W. toward the French frontier, or to the N.E., toward Verona and Tyrol if Swiss territory is to be avoided. The first passage available E. of the Swiss boundary is through the Umbrail-Stelvio and Reschen Scheideck Passes, where the Eastern Alps begin, this leading to the Inn Valley at Landeck. It is complicated both by the altitude (9049 ft.) and the steepness of the Vintschgau (E.) side of the Stelvio, but it should not be forgotten that the Ortler was the fixed flank of this portion of the front in the first world war, the old line extending across the Lombard Alps, N. of Lake Garda, and thence through the Dolomites to the Julian summits.

It is probable that the Brenner Pass, from Verona to Innsbruck, would be a military goal, since it is the lowest of all passes across the main chain of the Alps (4495 ft.), straight valleys on each approach leading to a single ridge. It became a frontier pass when Italy received South Tyrol by the Treaty of London. This is the shortest rail route from Rome to Munich, but its defiles are narrow and defensible, especially in the Eisack gorges for 20 miles N. of Bolzano. Drusus crossed it in 15 B.C. while pursuing the barbarians of the north, and the latter in turn poured through to the Italian plain in the fifth century. Later it was frequented by many German emperors to and from Rome, and Frederick I made use of it in 1158 for 100,000 foot troops and 15,000 horsemen.

But even the Brenner, in common with all passes of the Eastern Alps, strikes an E.-W. valley on its northern side, and the Inn and the Drave Valleys will divert a military column from direct routes to Germany. Other lateral passes must be crossed before the foothills of Bavaria and Salzburg are behind one.

Here one may consider the southern topography of the Brenner approaches. Bolzano is situated at the junction of the two head branches of the Adige—the Vintschgau, coming from the Stelvio Pass, and the Pusterthal, through which a rail line extends across the Toblach Pass to reach the head of the Drave. Lake Como is also connected with Bolzano by the line of the Aprica, Tonale and Mendel Passes, all S. of the Vintschgau and the Ortler peaks; but these lateral feeders, although S. of the main Alps, must always be remembered in the strategy of the Brenner area.

In 1932 the writer observed Italians in training on the Jaufen Pass, a short-cut from the Brenner at Vipiteno (Sterzing) to Merano. In 1935 they were building a motor road from Vipiteno to the top of the Pfitscherjoch, overlooking the Zillertal, and holding maneuvers on the Gran Pilastro (Hochfeiler). In those days, however, they were aroused by the possibility of the Austrian *Anschluss*, and Axis collaboration was not in their minds.

The passes E. of the Brenner lead from Venice or Trieste to the Drave Valley, and fan out E. of the Dolomites toward Villach and Klagenfurt. In travelling from Venice via Udine to Villach one crosses through the narrow gorges of the Pontebba Pass, the Tarvisio route. The Wochein and Karawankas tunnels (1901-6) afford the most direct rail route from Trieste to Vienna, the Hohe Tauern tunnel connecting the Drave Valley with Salzburg. Finally, the rail line eastward from Trieste across the Carniolan plateau of the Birnbaumer Wald to Ljubljana (Laibach) is beyond the limits of the Alps, skirting the mountains as does the Mediterranean coastal road on the W. But, if the Istrian peninsula is occupied, this is one of the routes to the Danube which avoids high mountains.

There are military experts who hold that the Alps are too formidable a barrier and too indirect a road to Germany if Switzerland is to be by-passed. Particularly in the Eastern Alps, the mountain defences of the first world war were never obliterated; the old trenches and the barbed wire are still there and could be cleared without great labor. We should encounter highly trained mountain troops on their home ground.

But even if we do not strike through the Eastern Alps, Southern Italy affords air bases for attack on industrial centers such as Linz and Wiener Neustadt, which hitherto have been difficult to reach because of distance.

On the other hand, an invasion thrust from the line between Genoa and Milan, across the French frontier at some point between the coastal road and the Little St. Bernard, is away from Germany, and it would take extended communication lines to reach the Rhone Valley and central France.

Between the fall of Rome and 1870 Italy was too weak to attempt these routes of conquest. Will the Allies now follow them?

As this is being written in mid-September, the R. A. F. has struck at the coastal road, destroying the viaduct near St. Raphael-Valescure, W. of Ventimiglia. They have also knocked out the rail yards at Modane, while French patriots operating from the mountains above St. Jean de Maurienne are said to have sabotaged the Fréjus tunnel. Italians, in the northern part of their country, are preventing passenger traffic through the Simplon tunnel, while another resisting group has held a portion of the Brenner line between Bolzano and Trento. Yugoslav guerrillas have taken a portion of the Adriatic coast S. of Fiume and control sections of the rail lines E. of Trieste.

Recently the Brenner road has been extensively bombed from Innsbruck to Trento, with particular attention to the Avisio viaduct, 1005 yards in length, just N. of the latter town. Dogna, on the Italian side of the Pontebba line, has also been attacked.

All of this facilitates the cause of the United Nations. It does not lessen the fact that the Alps afford comparatively poor pathways to the continent for land armies.