BOUNDARY GEOGRAPHY IN VENEZIA GIULIA 1945 to 1947

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Bernard Edward Neubert

1956

BOUNDARY GEOGRAPHY
IN
VENEZIA GIULIA
1945 to 1947

By
BERNARD EDWARD NEUBERT

AN ABSTRACT

Submitted to the College of SCIENCE AND ARTS
Michigan State University of Agriculture and
Applied Science in partial fulfillment of
the requirements for the degree of

MASTER OF ARTS

Department of GEOGRAPHY

1956

Approved Lawrence M. Sommers

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Bernard Edward Neubert

THESIS ABSTRACT

Venezia Giulia, an area at the headwaters of the Adriatic Sea, is renowned for its boundary disputes and geographic and ethnic complexity. This thesis evaluates the delimitation provisions of two post World War II boundaries in this region, namely, the Morgan Line and the Italian-Free Territory of Trieste (FTT) boundary, and analyzes the procedures and geographic problems connected with their later demarcation on the ground. An analysis of this kind may be termed boundary geography.

The principal objectives of the study are to discuss: (1) the importance of the lack of precise definitions of geographical phenomena by word and/or map in the agreements and treaty which provided for delimitation of the Morgan and FTT boundaries, (2) the effects that ambiguous geographic descriptions had upon the areas involved and later demarcation work in the field, (3) the procedures utilized and the problems resulting from the interpretation and transposition from both small scale maps and textual descriptions to ground locations and large scale maps for demarcation of these boundaries, and (4) constructive opinions regarding geography's contribution to the establishment of boundaries.

An evaluation and comparison of the differences and similarities of these two boundary problems bring out the importance of areal relationships in the establishment of boundaries separating political units. The differences fall under three main headings: (1) the general

situations surrounding their existence, (2) their origins and purpose, and (3) their provisions for delimitation and demarcation. The Morgan Line encountered difficulties due to the unfavorable military and political situation which surrounded its establishment and administration. This was not true in the case of the Italo-FTT boundary. The Morgan Line was a temporary boundary pending peaceful settlement of the Venezia Giulia question, whereas the other constituted the product of a negotiated and peaceful settlement. The delimitation defining the Morgan Line included a line upon a map plus other administrative provisions but no instructions pertaining to demarcation. The Italo-FTT boundary was defined by both word and map, together with arrangements for prompt demarcation.

The similarities also fall into three principal categories: (1) their areal relationships, (2) the procedures followed in demarcation, and (3) the geographic phenomena and problems encountered in their demarcation. The areas effected by the lines were contiguous. Regional aspects such as history, geography, ethnography and economy were similar. Map and/or word to ground relationships and geography, including basic land use investigation procedures, presented common patterns. The delimitation descriptions in both cases provided the demarcators with a number of questionable implications such as: intent, map and/or word interpretation and water demarcation.

The findings supported by the field work and library research of this study substantiate the views expressed by numerous prominent authorities on the subject of boundary affairs. These include: (1) the importance of Venezia Giulia as an area for study of problems in

boundary geography, (2) the significance of general situations surrounding boundary affairs, (3) the importance of harmonious relationships between demarcation teams, (4) the importance of continuity in the process of boundary development, (5) the demarcation difficulty caused by vague terminology in delimitation criteria, (6) the importance of prompt demarcation, (7) the limitations of maps as an authoritive instrument for delimitation and/or demarcation due to scale problems, (8) the importance of mutual understanding of problems of the delimitator and demarcator, (9) the undesirability of a boundary becoming administrative prior to demarcation, and (10) an awareness of the importance of geographic knowledge in boundary-making and the significant contributions regional geographers can make towards solving boundary problems.

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The opinions expressed in this thesis represent those of the author, presently an officer on active duty with the U.S. Army, and are not to be construed as reflecting the views of the United States Military Establishment.

PREFACE

After World War II (1945-47) the writer was involved in boundary demarcation while performing military duties in Gorizia and Trieste, Italy. Though always aware of the significance of geography in military science, it was during this period that the author was made cognizant of the important role it plays in boundary affairs.

In 1946 the writer initiated a marking survey along the American-Yugoslav sector of the Morgan Line, which served as an occupational boundary between Anglo-American and Yugoslav forces from June 12, 1945, to September 15, 1947. During July and August 1947 the author headed a Free Territory of Trieste (FTT) subdelegation engaged in the demarcation of the provisional boundary between Italy and the Free Territory.

This paper considers these two post war boundaries in Venezia Giulia; an area renowned for its boundary disputes and geographic complexity. It discusses the geographical and historical background of the territory. Boundary geography and the resultant effects the delimitation provisions of the Belgrade and Duino Agreements (June 9 and 20, 1945) and the Italian Peace Treaty (September 15, 1947) had upon geographic phenomena and subsequent demarcation procedures in the area are covered. An overall objective is to evaluate the delimitation of these two boundaries and analyze the procedures and geographic problems connected with their later demarcation on the ground.

Deepest appreciation is extended to Dr. Lawrence M. Sommers, Head, Department of Geography, Michigan State University, not only for the opportunity and assistance which he rendered in the preparation of this thesis, but for uncounted kindnesses and courtesies. Only through his laborious efforts was the author able to complete the paper.

Gratitude is extended to the Department of the Army for the policy which permits its personnel to pursue academic studies while on active duty status. Much thanks is expressed to The Adjutant General's Office, Department of the Army, and Mrs. Sophia Saucerman, Assistant Geographer, Department of State, for furnishing certain information and materials which otherwise could not be obtained by the author. Appreciation is also granted to the numerous other agencies with whom the author corresponded for their interest. The Michigan State University library provided the author with invaluable assistance through its inter-library loan service.

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INTRODUCTION

Control of strategically located Venezia Giulia has changed hands many times during history. Its geographic location makes it a passageway between the East and West, and a vital north-south connecting link between Central Europe and the Mediterranean Sea (Fig. 1).

During the past 38 years five major boundaries have divided Venezia Giulia and numerous territorial allocations have been proposed (Fig. 2). This thesis will discuss two specific boundaries and their problems: the Morgan Line and the Italo-FTT boundary (Fig. 3).

The Morgan Line boundary, a product of Anglo-American and Yugoslav negotiations (Appendix A), took effect before demarcation on the ground. It was known to those concerned with its surveilance as a thick line upon a small scale map, or as an irregular north-south line defined by widely interspersed Anglo-American and Yugoslav control posts that more or less paralleled each other at varying east-west distances. Problems and incidents resulting from a lack of understanding of where the exact boundary line was located on the ground necessitated subsequent demarcation. The jurisprudence of demarcation was governed almost entirely by the width of the lines drawn on two separate maps; one Anglo-American and the other Yugoslav.

The provisional boundary between Italy and the FTT (Appendix B) did not become effective until after precise demarcation. It was established from written textual description in the Italian Peace Treaty and

VENEZIA GIULIA IN EUROPE
FIG. 1

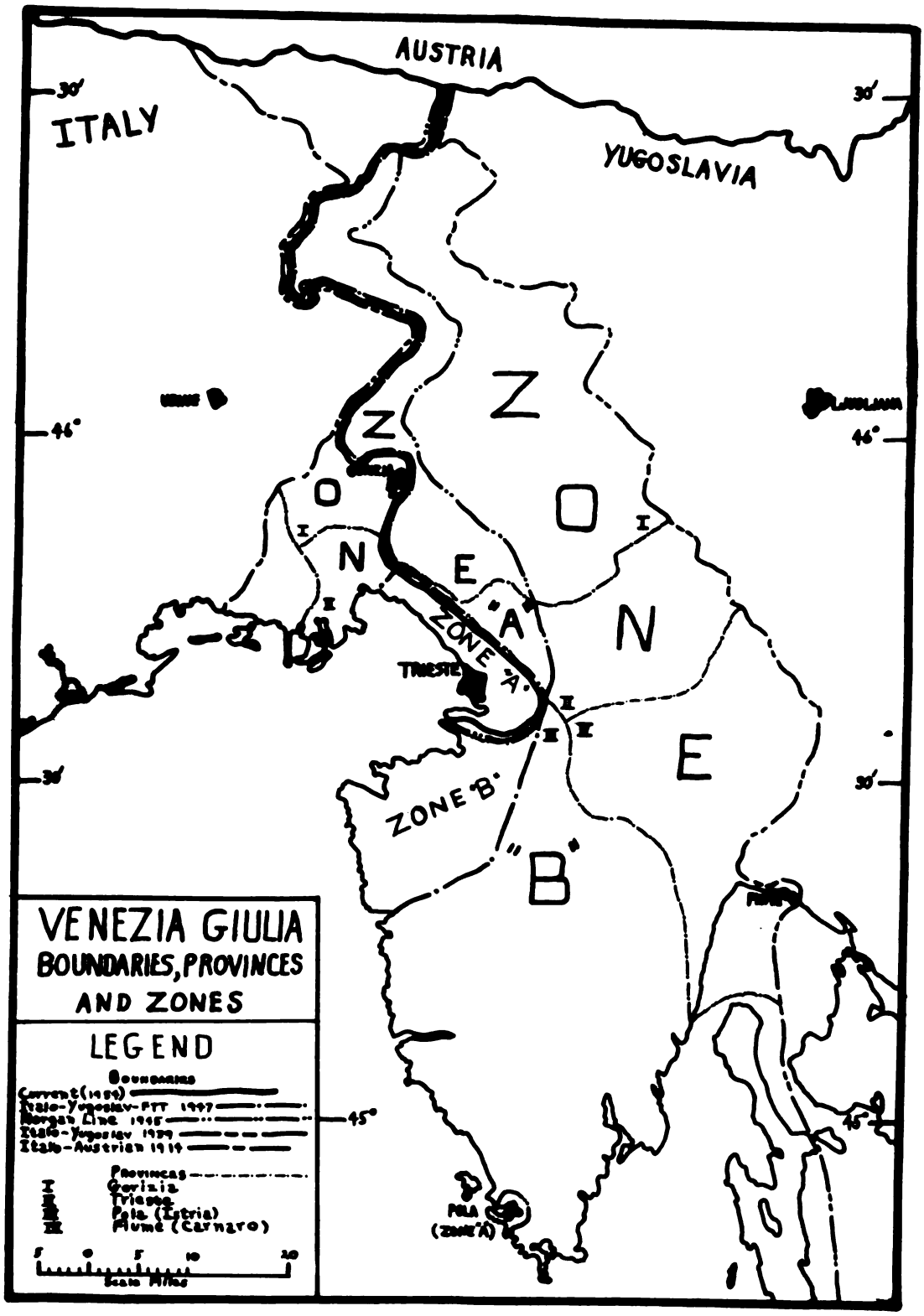
AUSTRIA
ITALY
YUGOSLAVIA
ZONE
ZONE
ZONE
ZONE
"A"
"B"
ZONE "A"
ZONE "B"
TRIESTE
PULA
(ZONE "A")
VENEZIA GIULIA
BOUNDARIES, PROVINCES
AND ZONES
LEGEND
Boundaries
Provinces
I Gorizia
II Trieste
III Pola (Istria)
IV Fiume (Carnaro)
Scale Miles

Fig. 2

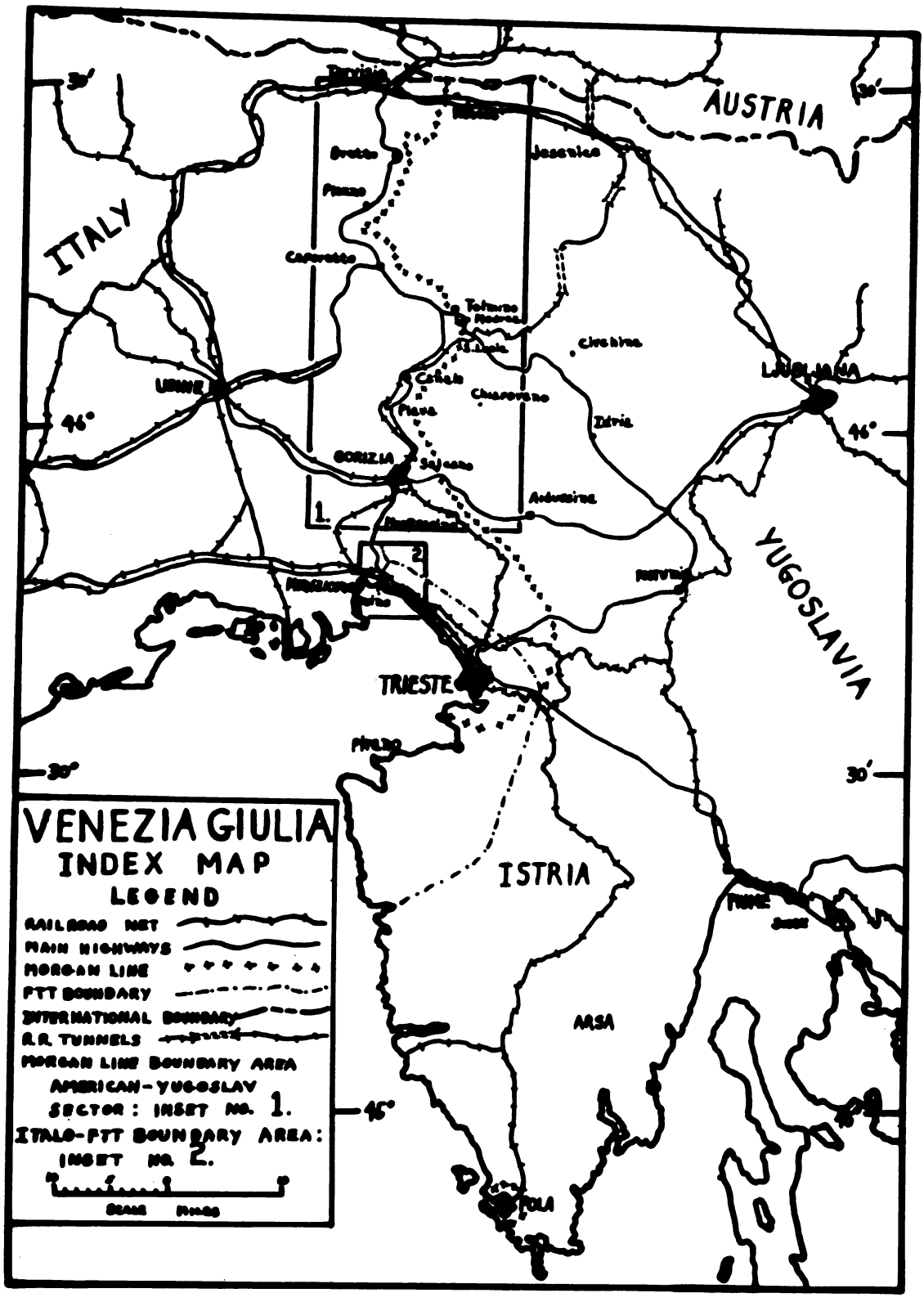
AUSTRIA
ITALY
YUGOSLAVIA
LJUBLJANA
GORIZIA
TRIESTE
ISTRIA
ARSA
POLA
VENEZIA GIULIA
INDEX MAP
LEGEND
RAILROAD NET
MAIN HIGHWAYS
MORGAN LINE
FTT BOUNDARY
INTERNATIONAL BOUNDARY
R.R. TUNNELS
MORGAN LINE BOUNDARY AREA
AMERICAN-YUGOSLAV
SECTOR: INSET NO. 1.
ITALO-FTT BOUNDARY AREA:
INSET NO. 2.

Fig. 3

a small scale map appended thereto. The demarcation was pre-planned and controlled by appointed commissions in accordance with treaty provisions.

Although the general situations surrounding territorial allocation, the provisions for delimitation, and the instructions governing demarcation differed for each line; the geographic implications encountered and demarcation procedures employed were similar. An evaluation of these differences and similarities of the boundaries and the area they traverse brings out the importance of areal relationships in the establishment of lines separating political units.

The principal objectives of this study are to discuss the boundary geography of Venezia Giulia which includes: (1) the geographical and historical backgrounds of the region, (2) importance of the lack of precise definition of geographical phenomena by word and/or map in the agreements and treaty which provided for delimitation of the Morgan and FTT boundaries, (3) the effects that the ambiguous geographic descriptions had upon demarcation work in the field, (4) the procedures utilized and the problems resulting from the interpretation and transposition from both small scale maps and textual description to ground locations and large scale maps and for demarcation of these boundaries, and (5) constructive views regarding geography's contributions to the establishment of boundaries.

CHAPTER I

VENEZIA GIULIA: BACKGROUND INFORMATION

Physical Geography

Size, Shape and Location

The region called Venezia Giulia has little or no physical or cultural cohesiveness. The name originated with the Italians who refer to the entire area between Italy's pre-World War I and II borders from the Adriatic Sea to the Austrian boundary including the Istrian peninsula. However, the name does have an origin somewhat geographic in nature. The first part, Venezia, was derived from the southwestern Friulian plain and Alpine piedmont which formerly belonged to the Republic of Venice. Giulia came from the Julian Alps, which dominate the northern sections of the area.[1]

Venezia Giulia covers approximately 3,500 square miles, about 1,500 of which compose the Istrian peninsula. Its long axis is oriented in a north-south direction from the Austrian border and the Alpine barrier to the maritime city of Pola on the Adriatic Sea. Specifically Venezia Giulia is located within the historic Italian provinces of Fiume (Carnaro), Gorizia, Trieste and Pola (Istria) (Fig. 2). Geographically the area forms a transitional zone between the large middle Danube river plain to the east and the upper Adriatic basin on the west. The Ljubljana basin which forms a western extension of the Danube plain is immediately east of the area. Fronting on the west is the Friulian

plain, the eastern most part of the upper Adriatic basin. The east-west distance between the Ljubljana basin and Friulian plain or from the cities of Ljubljana to Gorizia is less than seventy miles. This saddle in the plateau between the southeastern extension of the Julian Alps and the northwestern limits of the Dinaric Alps has created a land corridor of great strategic importance (Fig. 4).

Physiography

Topographically, Venezia Giulia is mostly highlands. The Julian Alps mountains in the north reach maximum heights of 9,000 feet although their average is much lower. To the south the plateaus range in altitude from 500 to 4,000 feet. Narrow plains areas fringe the coastline of Istria. The five main physiographic regions in the area are: the Julian Alps, the Karst plateaus,[2] the Isonzo River trough, the Vipacco and Recca River depressions, and the Istrian coastal strips (Fig. 4), (Pl. I and II).

A great belt of significant limestone plateaus make up about two-thirds of Venezia Giulia and Istria. Drainage on these karst plateaus is almost wholly by underground channels leaving the surface dry, barren and rocky. The soils are generally thin except for accumulations in the valley depressions. Dolinas or sinkholes formed by the solution of limestone near the surface and later subsidence or caveins from hidden drainage are prevalent and give rise to a very rough and uneven surface. The largest sinkholes and subterranean caverns are found near Postumia. One of the best examples of the subterranean channel characteristics is the Timavo River, which will be of concern later. The Timavo, called Recca or upper Timavo at its source, disappears underground about twenty

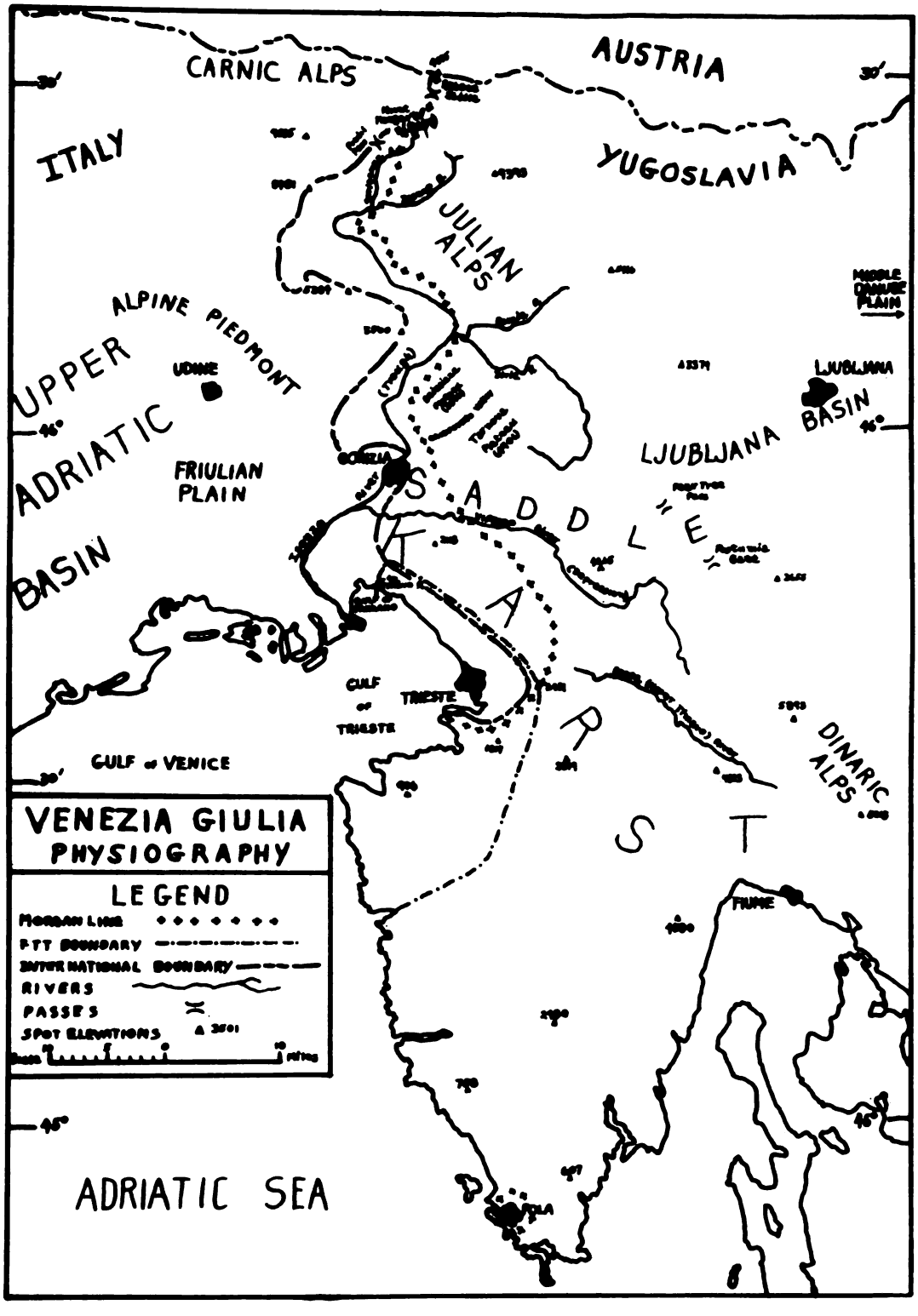
CARNIC ALPS
AUSTRIA
ITALY
YUGOSLAVIA
JULIAN ALPS
ALPINE PIEDMONT
UPPER ADRIATIC BASIN
UDINE
FRIULIAN PLAIN
GORIZIA
LJUBLJANA BASIN
LJUBLJANA
SADDLE
TRIESTE
GULF OF TRIESTE
GULF OF VENICE
DINARIC ALPS
FIUME
ADRIATIC SEA
VENEZIA GIULIA PHYSIOGRAPHY
LEGEND
MORGAN LINE
FTT BOUNDARY
INTERNATIONAL BOUNDARY
RIVERS
PASSES
SPOT ELEVATIONS

Fig. 4

PLATE I

Fig. 1. Northeasterly view towards the village of Salcano and the Bainsizza Plateau area of the southern end of the Isonzo River tectonic trough

Fig. 1

Fig. 2

Fig. 2. Southwesterly view from vicinity of Mount San Gabrielle across the broad Vipacco River synclinal depression. The distance to the plateau on the horizon is about seven miles.

Fig. 3. A view east from the port of Trieste towards the Karst Plateau rising 1,000 feet in the background

Fig. 3

PLATE II

Fig. 1

Fig. 1. Julian Alps in northern Venezia Giulia vicinity 1939 Italo-Yugoslav border

Fig. 2. Northern extremity of the arable Istrian coastal fringe between Trieste and Pirano

Fig. 2

Fig. 3. A portion of the port facilities in the harbor of Trieste (1947)

Fig. 3

miles from its mouth and emerges again from the limestone plateau escarpment north of Trieste and less than one half mile from the Adriatic Sea.

Climate

The climate of the region is transitional between Mediterranean and continental types.[3] A zone of heavier rainfall separates two areas of lesser precipitation. It is an area of contrasting pressure gradients and temperatures, especially during the winter months. The Adriatic coast has a typically Mediterranean climate but areas inland are considerably modified by continental Central European weather.

Annual rainfall is higher than would be expected, especially in the west and the western facing slopes of the Julian Alps. The temperature contrasts between coastal and interior areas reflect the topographical differences with extremely low inland temperatures during the winter months.

As the karst was characteristic of the geomorphology of the region, so the Bora winds are indicative of the weather.[4] The Bora is most pronounced in the vicinities of Trieste and Fiume and help to explain the differences in atmospheric pressure gradients between Adriatic and the continental interior. The winds, in evidence the year around, are more pronounced during the winter months. During the summer the weak Bora winds cause pleasant dry air movements. This is in extreme contrast to the winter when the strong, cold Bora often reaches destructive force and is most unpleasant.

Resources

Venezia Giulia is poorly endowed with natural resources. As mentioned before, the land except for the mountainous Julian Alps is predominately karst. It is generally poor for agriculture except in the bottoms of narrow and steep walled valleys, the broad Vipacco-Recca (upper Timavo) River valleys, the rich but shallow coastal plain between Trieste and Pirano, and along other Istrian peninsula inlets. Istrian bauxite and Idrian mercury are the most important mineral resources. Limestone is in abundance throughout the entire karst area. A poor grade of lignite and soft brown coal is found in the Arsa mines of southeastern Istria (Fig. 3). Small amounts of copper, lead, marble, salt, zinc, and silica are extracted. The forests of the Julian Alps yield a fair quantity of lumber, mostly beech and pine. The mountain streams furnish a good source for hydroelectric power, especially in the upper Isonzo River valley.

Cultural Geography

Population

Population figures for Venezia Giulia totaled about one million in 1946. In this same year Italian officials reported a mixed population of 400,000 Italian and 600,000 Slavic peoples, while Yugoslav estimates were 650,000 Slavic peoples and 250,000 Italian.[5] An interesting feature is that Trieste contained about 28 percent of the population of the entire area in 1948. Of this total, 275,000; 86 percent (236,144) were reported as Italian, 8 percent (21,968) as Slavic and 6 percent (16,476) as others.[6]

Population is concentrated in the cities of Trieste, Monfalcone, Gorizia, Fiume and Pola. Other cities of note fringing the area include Udine and Ljubljana. Densely populated rural areas are the arable land of the Vipacco-Recca (upper Timavo) depressions, the Isonzo River valley and lowlands along the Istrian coast. The Italians settled in the larger cities and towns, and villages along the coast. The Slavic peoples as a rule clung to their peasant dwellings and rural villages in the hinterland.

Economy

A poor agrarian economy dominates Venezia Giulia. The major exceptions are the commercial and industrial port city of Trieste, maritime Pola, Fiume and Monfalcone, and the commercial center of Gorizia. Those not engaged in agriculture sought employment in the extracting and processing enterprises, the public services, transportation and communication facilities, hydroelectric installations, and lumbering. Resorts along the coastal areas of the Istrian peninsula and the Postumia caverns attract tourists. The essential economic aspects of Venezia Giulia may be summed up as follows: agricultural poverty due to the prevalence of karst topography with poor soil, some forestry in the mountain ranges, the existence of some ores of importance, hydroelectric development, a well developed rail, highway and communications network, and a concentration of commercial and industrial activity around Trieste and Fiume (Fig. 3).

Differences exist in the livelihood of the two main ethnic groups. The principal source of income for the Italians is from retail businesses, commerce, industry, public service and fishing. Slavic peoples, on the other hand, are engaged mainly in farming, mining and lumbering.

International boundaries and ideological differences interfere with the natural economic and trade orientation of Venezia Giulia and Istria. For example, Trieste is a natural outlet for the middle Danube River plain and central European countries. Two world wars in less than four decades resulted in international boundary disputes which constitute barriers to free trade, national divergency of economic interests, political incompatability and ideological differences, all of which have had a drastic effect on the entire area. Geographically, the economic destiny of the area as well as the future growth and prosperity of Trieste appears to be linked with the political and economic fortunes of the Danube River Basin countries and Central Europe.

The points covered above by no means exhaust the complex geographic phenomena of Venezia Giulia. The intent has been to focus on only those factors considered most pertinent to the thesis problem.

Early History

Venezia Giulia since the beginning of its history until present, has constituted a zone of contention.[7] This physically and culturally geographically complex region is a cauldron of national and international political intrigue, intermixed ethnic groups, economic strain and militaristic jealousies.

A brief chronology of the major historical events begins with the Romans who made their presence known in Venezia Giulia and Istria as early as 200 B.C. The Byzantines later defeated Roman forces in the fourth century A.D. For the next four centuries a virtual no-man's-land existed due to the barbaric invasions of Goths, Huns, Lombards and Avars. Charlemagne, the Frank, appeared in the late eighth century, and

a temporary stability ensued. After Charlemagne's death in 814 the land corridor became a prize fought for amongst the feudal barons. Five centuries later, 1335, the powerful Habsburgs of Austria culminated these feudal wars and established their dominance in the region. The maritime Republic of Venice served as an ardent contestant for control of the area until 1521 when it met defeat in battle. However, Venetian resistance and Turkish intrusions continued to plague the Austrian dynasty until the end of the seventeenth century. Napoleon arrived during his great military campaigns in 1797, after destroying Venice as a state. The area was divided and fought over between Austria and France for the next fifteen years. With the decline of Napoleon in 1815 the Habsburgs gained full supremacy. But, Italy, after mid-century expressed an ardent desire for possession of the defensible and natural geographic frontiers to its northeast. The power of the Austrian-Hungarian Empire, however, was destined to increase and remain unchallenged until World War I.

Of geographic significance is the fact that Austria took a tremendous interest in developing the natural harbor of Trieste during the pre-World War I era. Trieste became one of the world's greatest seaports and principal outlet to the high seas not only for the immediate hinterland of Venezia Giulia and Istria, but the entire middle Danube River plain and Central Europe.[8]

Thus through the centuries the Roman, Byzantine, Goth, Hun, Lombard, Avar, Frank, Feudal Baron, Venetian, Turk and Frenchman have utilized the bridgeland as a crossroads and thoroughfare. The Austrian and Italian were concerned with its value to them as a frontier for national, military and economic reasons.

Recent History

Yugoslav claims to Venezia Giulia begin in the seventh century when the Slavs migrated into the Venezia Giulia and Istrian areas. These Slavs were agrarian by nature and settled inland from the coastal areas. Throughout the centuries they constituted the serf and peasant population of the hinterland. They played little or no part in the foreign military or political struggles for dominance of Venezia Giulia prior to the turn of the present century. Nevertheless, they were able to survive and successfully multiply under the many pressures until the early twentieth century when the South Slav nationalism movements for self-determination began.

The results of World War I was disasterous to the Austrian-Hungarian Empire's sovereignty over Venezia Giulia and Istria. The post war period witnessed the carving up of the Empire and with it the area under discussion. The creation of the still current territorial dispute over the area between Italians and Slavs began when the spoils of war were divided by the victorious Allies.

As part of its promised spoils Italy was given control of Venezia Giulia and Istria, including the flourishing port of Trieste. The geographic, historic, ethnic and economic claims to Venezia Giulia and Istria by the newly created nation of the Yugoslavs were denied. The resulting boundary between the two states was established along the militarily defensible, geographic feature of the northeast-southwest Julian-Dinaric Alps mountain chain (Fig. 3).

Yugoslavia and Italy emerged from World War II in a reversed situation. Today Italy still possesses a bridgehead in the area in the port of Trieste, Gorizia and the Friulian-Alpine piedmont immediately

west of the Isonzo River. Yugoslavia controls the commanding heights of the hinterland including Istria and practically all of Venezia Giulia (Fig. 3). Whether the current Italian-Yugoslav border has justly solved the boundary problem between the two nations is highly debatable. Italy too has justifiable geographic, historic, ethnic and economic claims which have been denied. That history has recorded the last boundary change in the disputed territory of Venezia Giulia and Istria is improbable.

Summary

Venezia Giulia constitutes a distinct but complicated transitional zone. Geographically it is characterized by its diversity. It forms an east-west topographic barrier, yet provides a short, traversible, low altitude land corridor of strategic significance between two large and rich structural basins. It provides for north-south rail and road communication links between central Europe and the sea, but is denied the economic advantages because of political complications. Ethnically it is a meeting point of Latin, Germanic and Slavic peoples. Climatically it is a transition zone between Mediterranean and continental types, but possesses none of the better qualities of either. The rocky, infertile soils of the mountains and plateaus hardly compare with the fertile plains to the east and west. It is not richly endowed with natural resources, but possesses a few worthy of exploitation. Historically the area has served as a zone of contention between civilization and barbarism; land power and sea power; Christianity and Islam; and numerous nationalities. Currently it is a zone of tension between western democratic ideals and eastern communist ideology; continental

land based and overseas power; and neighbor nations. From the foregoing it readily follows that boundary disputes in Venezia Giulia have taxed the ingenuity of statesmen and soldier, and occupied the time of historian and geographer.

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[1] Allied Military Government British/United States Zone FTT, Trieste Handbook, revised edition; Trieste: May 1, 1950, p. 3.

[2] The name Karst or Karst topography is derived from the limestone district of the Dinaric Alps to the south along the Adriatic coast of Yugoslavia. Limestone plateau areas of Venezia Giulia are thus referred to as the Karst.

[3] The Mediterranean climate is characterized by long dry summers and mild moderately rainy winters, whereas the continental climate is characterized by extremes of daily and seasonal temperatures, precipitation occurring principally during the summer months, and low humidity.

[4] The Bora winds of the eastern coast of the Adriatic Sea and northern Italy correspond to the Mistral winds of southern France. The Bora occurs when atmospheric pressure is high over the highlands and low over the Mediterranean Basin. It is usually characterized by clear skies and cold dry weather. When associated with a very low depression in the Adriatic, cloudiness and precipitation result.

[5] C. Grove Haines, "Trieste--A Storm Center of Europe," Foreign Policy Reports, Vol XXII, No. 2, April, 1946, p. 15.

[6] Allied Military Government British/United States Zone FTT, Trieste Handbook, Trieste: June 1, 1949, p. 24.

[7] A. E. Moodie, The Italo-Yugoslav Boundary - A Study in Political Geography, London: G. Philips and Sons Ltd., 1945, p. 44-135. Moodie's treatment of this subject is extremely detailed and comprehensive. It constitutes the best single informative summary on the history of Venezia Giulia uncovered by the author.

[8] Haines, Op. Cit., p. 18 and Jean Gottman, A Geography of Europe, New York: Henry Holt and Co., 1951, p. 512.

CHAPTER II

BOUNDARY GEOGRAPHY: TWO EXAMPLES IN VENEZIA GIULIA

Boundary problems have contributed more than their proportionate share to the history of Venezia Giulia. These border disputes should be studied in relation to their geographical setting. Two examples of what may be termed Venezia Giulia's boundary geography are discussed in this paper, namely the Morgan Line and the FTT Line which are representative of the types of geographic questions involved in the establishment of boundaries.

Definitions Used in Boundary Geography

Boundary geography, in its broadest sense, is a science of regions.[1] This study will be confined to a small segment of the scope of the term, specifically boundary demarcation and associated geography.

Before analyzing the two boundaries in Venezia Giulia, an understanding of the stages involved in boundary-making and a few definitions are necessary. Most authorities recognize four main stages in the history of a boundary: (1) territorial allocation, (2) delimitation, (3) demarcation and (4) administration.[2]

Territorial allocation by political decision, the first stage, is of little concern in this paper. Delimitation by agreement or treaty, the second stage, is of major importance as is the third stage, demarcation of the boundary on the ground. The fourth stage, administrative

functioning and control of the boundary, is of interest only insofar as it effects delimitation and demarcation problems. In the process of boundary-making these main steps may take place chronologically, overlap, precede each other or be separated by long periods of time.[3] The Morgan Line will amplify this point and its related implications.

The word delimitation used herein refers to the written and/or map line description of a boundary as defined in an agreement or treaty.[4] Demarcation entails the actual physical placement of the boundary line upon the ground.[5]

Importance of the General Situation

It has been stated that the goodness or the badness of any boundary depends as much upon the general situation surrounding its origin and establishment as upon the subsequent details of delimitation and demarcation.[6] It has also been pointed out that the major source of serious boundary frictions originate from the general situation more than the line itself.[7] These points are brought out to some extent in the Morgan Line and Italo-FTT boundaries. The Morgan Line agreement was drawn up at the last minute under the stress of immediate post war political and military tensions. The Italo-FTT boundary, a part of the Italian Peace Treaty, was negotiated under less trying circumstances after lengthy investigation and detailed planning. It was drawn up as a permanent statute and presented no serious problems. The Morgan Line was a more or less arbitrary line designed as a temporary military government line of occupation pending final peace settlement negotiations and was a source of boundary friction. Who can say which would have been the "better" boundary had the general situation been reversed?

Delimitation

As mentioned above, delimitation comprises the selection of the boundary location and is defined in formal terms. Delimitation includes more detailed information pertaining to the boundary than the general allocation of territory but does not include the mechanical intricacies involved in demarcating the line on the ground. Consequently, in order to carry out the precise demarcation proceedings which usually follow delimitation, the formal documents delimiting the boundary must be exact in the use of words and explicit in reference to lines drawn on maps.[8] Questionable delimitation provisions in treaties or agreements will undoubtedly lead to demarcation problems and friction, even though the allocation of territory and delimitation of the boundary has been most thoroughly studied and carefully selected.[9] Definitions, whether by word and/or map, must correspond to the realities of geography.[10]

The delimitation provisions for the Morgan Line were definitely ambiguous while those for the Italo-FTT boundary were more precise. However, the latter, too, lacked sufficient detail and explanation for all segments of the line.

Demarcation

The tendency in boundary-making is not to appreciate the value of field investigation and firsthand knowledge of an area when confronted with a large volume of documentary information.[11] Persons charged with describing the delimitation of a boundary should be thoroughly familiar not only with the area and demarcation procedures in the field, but also with problems which may result from faulty boundary delimitation

definitions.[12] Seldom, if ever, will the individuals who demarcate a boundary be directly concerned with the governing provisions of delimitation.[13] However, they should be familiar with the general aspects of delimitation.[14]

Demarcation as stated above involves work in the field and results in physical evidence of a line upon the ground. Probably the outstanding concern of the boundary demarcator, other than being competent in his technical skill, is the preciseness and clarity of instructions which govern the jurisdiction of delimitation.[15] The two examples at hand furnish ample material for constructive evaluation. The Morgan Line, whose delimitation did not include written description or provisions for demarcation procedures, was of necessity later marked on the ground from map lines alone. The Italo-FTT boundary was marked from both written description and map line reference, as well as specific provisions for demarcation. In the case of the Morgan Line, interpretation of maps and the subsequent placing of markers on ground locations involved much more than the mere technical aspects of demarcation. In both instances, however, the geographic realities of the terrain were recognized insofar as authority to make minor boundary adjustments were concerned. Fortunately too, in each of the following problems harmonious working relationships ensued between the demarcation teams.

Summary

The general situation surrounding the Morgan Line, together with its territorial allocations, was one of tension. Its delimitation was not precisely defined for adequate ground demarcation. Although established and functioning, inconveniences and dissatisfactions originated

because of its vague location on the ground. The line as such presented a most complex problem for all concerned.

The Italo-FTT boundary, on the other hand, presents a study of conditions under a more amiable situation. It exemplifies a more precise delimitation, and provisions for prompt demarcation prior to administration. With the exception of questionable delimitation for a small segment of the line, it created only a few minor problems which were easily resolved.

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[1] Stephen B. Jones, Boundary-Making, A Handbook for Statesmen, Treaty Editors and Boundary Commissioners, Washington, D.C.: Carneige Endowment for International Peace Division of International Law, Monograph No. 8, 1945, pp. 19, 20, 54. This handbook has been utilized throughout the formulation of this chapter. It is a masterly work on the art and science of boundary-making. The author has consolidated into this one book almost everything of value that anyone has had to say concerning boundary delimitation and demarcation. Preston E. James and Clarence F. Jones (Eds.), American Geography-Inventory and Prospect, Syracuse: Syracuse University Press, 1954, Chapter II, Chapter VII, pp. 214-221, also contains an excellent account of regional concepts and regional method, plus a valuable discussion on geography's relationship to boundaries.

[2] Jones, Op. cit., p. 5.

[3] Ibid, pp. 5, 6, 54.

[4] S. Whittemore Boggs, International Boundaries-A Study of Boundary Functions and Problems, New York: Columbia University Press, 1940, p. 32.

[5] Ibid.

[6] Jones, Op. cit., pp. 3, 162.

[7] Ibid., pp. 13, 162.

[8] Ibid., pp. 49-53, 64, 65, 162.

[9] Ibid., pp. 66, 67.

[10] Ibid., pp. 5, 57, 72, 73.

[11] Ibid., p. 72.

[12] *Ibid.*, pp. 5, 66-71, 162.

[13] *Ibid.*, pp. 54, 224.

[14] *Ibid.*, p. 224.

[15] *Ibid.*, pp. 66-71, 162.

CHAPTER III

THE MORGAN LINE

The temporary Morgan Line boundary was established and was functioning in an administrative capacity prior to its actual demarcation on the ground.[1] An understanding of the circumstances surrounding the boundary situation, aspects of delimitation, and resultant geographic problems are significant to this study.

The General Situation

The atmosphere and relationship between the Anglo-American and Yugoslav officials regarding the creation and establishment of the Morgan Line boundary was not too congenial. These attitudes had an adverse effect upon subsequent events. It was reflected in the numerous incidents and clashes which evolved prior to and during the occupational period.[2] The necessity for easing tensions and unpleasant boundary situations was a challenge to all concerned.[3]

Delimitation

The Morgan Line boundary was based upon military requirements and as a result cut across areas without historic, geographic, economic or ethnic justification.[4] This was fully recognized and provisions were made to permit daily normal civilian activities subject to necessary

controls. The Belgrade and Duino Agreements specifically contained detailed instructions for furtherance of these aims.

Belgrade Agreement

The Morgan Line boundary proposed for the provisional administration of Venezia Giulia was traced upon a map appended to the June 9, 1945, Belgrade Agreement between the governments of the U.S., Britain and Yugoslavia (Appendix C). The Agreement allocated and delimited the area and made certain administrative provisions, but did not mention demarcation. Therefore, it is doubtful whether subsequent demarcation was contemplated when it was drawn up. Since a marking survey to improve the boundary situation was later initiated in the American-Yugoslav sector, an assessment of the implications resulting from the absence of demarcation instructions in the Agreement can be made.

The line was traced in two colors (black and yellow) upon a 1:200,000 scale map. This line, measuring 3/20 of an inch in thickness, represented a ground distance of approximately one half mile on flat terrain. On sloping or mountainous topography the distance would be greater. Interpretation and subsequent transposition to the ground of a map line under these conditions creates special problems.

It could be assumed that: (1) from edge to edge the line was intended to depict an irregular zone on the ground about 1/2 mile in width, or (2) the center of the boundary where the two colors joined was intended to depict a single line on the ground.

The former assumption appears unlikely as a zone would have constituted a buffer or neutral area. In this case provisions for evacuation of the intervening area or special controls would have been made.

As this was not stipulated the latter assumption seems most probable. In substance the Belgrade Agreement provided for: a territorial allocation between Anglo-American and Yugoslav military governments, a proposed line of considerable width upon a small scale map which delimited Venezia Giulia, and certain other administrative provisions. Putting the June 9, 1945, Belgrade Agreement into effect and further amplification of its provisions was left entirely to a later military conference between the Anglo-American and Yugoslav authorities in Venezia Giulia.[5]

Duino Agreement

On June 12, 1945, the Anglo-American troops advanced eastward to the general vicinity of the proposed Morgan Line boundary after Yugoslav forces withdrew eastward from the area as previously agreed. The military conference, mentioned above, between Allied Forces and Yugoslav Chiefs' of Staff took place between June 13-20, 1945, at Duino, Italy (Appendix D). The results of the conference are known as the Duino Agreement.[6]

> The Duino Agreement made no reference to the controversial issues of civil administration. It defined precisely the boundary between the two zones, Yugoslav rights to war booty, and conditions under which the Yugoslav Army detachment would operate. Further it provided for joint operation of railways and for the establishment of joint economic agencies; detailed arrangements were left for later settlement.[7]

Study of a copy of the Duino conference map which amplified the proposed Morgan Line boundary indicates that it defined the boundary more accurately than the Belgrade Agreement. The redefined line was not as wide and was in one rather than two colors. It was about 1/16 of an inch thick and traced upon a 1:100,000 scale map. This would represent approximately one eighth of a mile in ground distance.

If any additional details pertaining to on-the-ground demarcation of the boundary or establishment of control posts were later incorporated into the Duino Agreement, they are not known to the author. The procedures and techniques in making adjustments to the proposed line also are unknown. However, it is assumed that the proposed Morgan Line boundary and the text of the Belgrade Agreement were used as principal guides.

Neither the Belgrade or Duino Agreements took into account the possible complications which might arise from the lack of specific delimitation provisions connected with transposition of a line from a map to the ground. From available information, together with personal knowledge of the situation as it existed in the field, it appears that the demarcation aspects connected with the establishment of the Morgan Line boundary on the ground evolved and grew around situation, circumstance and necessity rather than specific direction.

Implications in the Field

A description of the significant factors which established the location of the Morgan Line boundary on the ground prior to the marking survey will give credulance to the effects of the lack of demarcation provisions in delimiting instructions. The location of boundary control posts of respective controlling agencies assumed a tremendous importance. Insofar as identification of the boundary on the ground was concerned, their locations in relation to each other, in effect depicted the boundary as both a zone and a line.[8]

The specific location of the boundary with respect to a line upon the ground was not readily apparent in the American-Yugoslav sector. Some twenty to thirty control posts were established by the American

units charged with control of the boundary.[9] An equal number or more were established by Yugoslav units. These control posts, spaced intermittently at critical military points over a seventy mile stretch were located primarily on east-west communication routes such as highways, roads, cart trails and footpaths.

Most control posts were in the general vicinity, and a few were beyond sight of the boundary area altogether. A linear boundary, upon the ground, resulted only when the American and Yugoslav control posts were in close proximity (Pl. III, Fig. 1). When the posts were established some distance apart they constituted a zonal boundary (Pl. III, Fig. 2).

Little coordination existed between the two parties in relation to respective control post sites. In the majority of cases an irregular east-west zonal boundary resulted with a no-mans-land between the intervening north-south distances.

With a few exceptions, each American control post had a three language sign (English, Italian, Slovene) adjacent to it which on the west facing side read: "Demarcation Line Limit Zone of British-American Military Occupation," and on the east facing side read: "Demarcation Line Limit of Zone of Jugoslav Military Occupation" (Pl. III, Fig. 1). These signs together with their associated control posts in effect established definite demarcated locations. However, rather than alleviating questionable location of the true boundary at their site, the signs tended to add confusion, for only a few were located in close proximity to where the boundary line drawn on the delimitation maps actually traversed the ground. The Yugoslav control posts exhibited no signs.

PLATE III

Fig. 1. Linear boundary effect of the Morgan Line in Vipacco depression east of Gorizia. The American control post is in the foreground and the Yugoslav immediately behind.

Fig. 1

Fig. 2. Zonal boundary effect of the Morgan Line near Montespino. The American control post is in the foreground and the Yugoslav is near Battuglia out of sight on horizon. Note the deep soil of Vipacco Valley.

Fig. 2

Fig. 3. Lake at Mo'rea in the Tolmino Basin astride the Morgan Line. Basin is between the mountain and plateau areas. Note the control posts at ends of bridge across Isonzo River at San Lucia in foreground.

As a result of the foregoing, complications arose pertaining to both of the occupational administrations' jurisdiction over local inhabitants and property in the vicinity of the boundary. Similarly respective military units patrolling the intervening areas between the control posts which paralleled the boundary area encountered difficulties and misunderstanding.

Geographic Traverse

The Morgan Line, approximately seventy miles long in the American-Yugoslav sector, extended from the Vipacco River, a short distance southeast of Montespino, in the south to the Austrian border (Fig. 5). The northern end joined the 1939 Italian-Yugoslav border near Mount Mangart and continued north along that boundary. Between these two points the line generally followed the precipitous slopes and crests just east of the deep Isonzo and Coritenza River valleys. Minimum and maximum elevations along the boundary ranged from 319 feet in the Vipacco valley to 8671 feet at Mount Mangart.

The Morgan Line traversed three different physiographic features; namely, the northern portion of the broad, fertile and well populated Vipacco lowland; the western most edges of the rocky, barren and thinly populated Tarnova-Bainsizza plateau; and the western and central parts of the high, rugged and sparsely inhabited Julian Alps. A fourth feature, the Isonzo-Coritenza River trough was not traversed by the line but was immediately west and adjacent. It exercised a dominating influence upon the boundary geography of the Morgan Line (Fig. 5).

On the whole the economy of the entire area was poor. With a few exceptions in the Isonzo valley the economy was subsistence in nature.

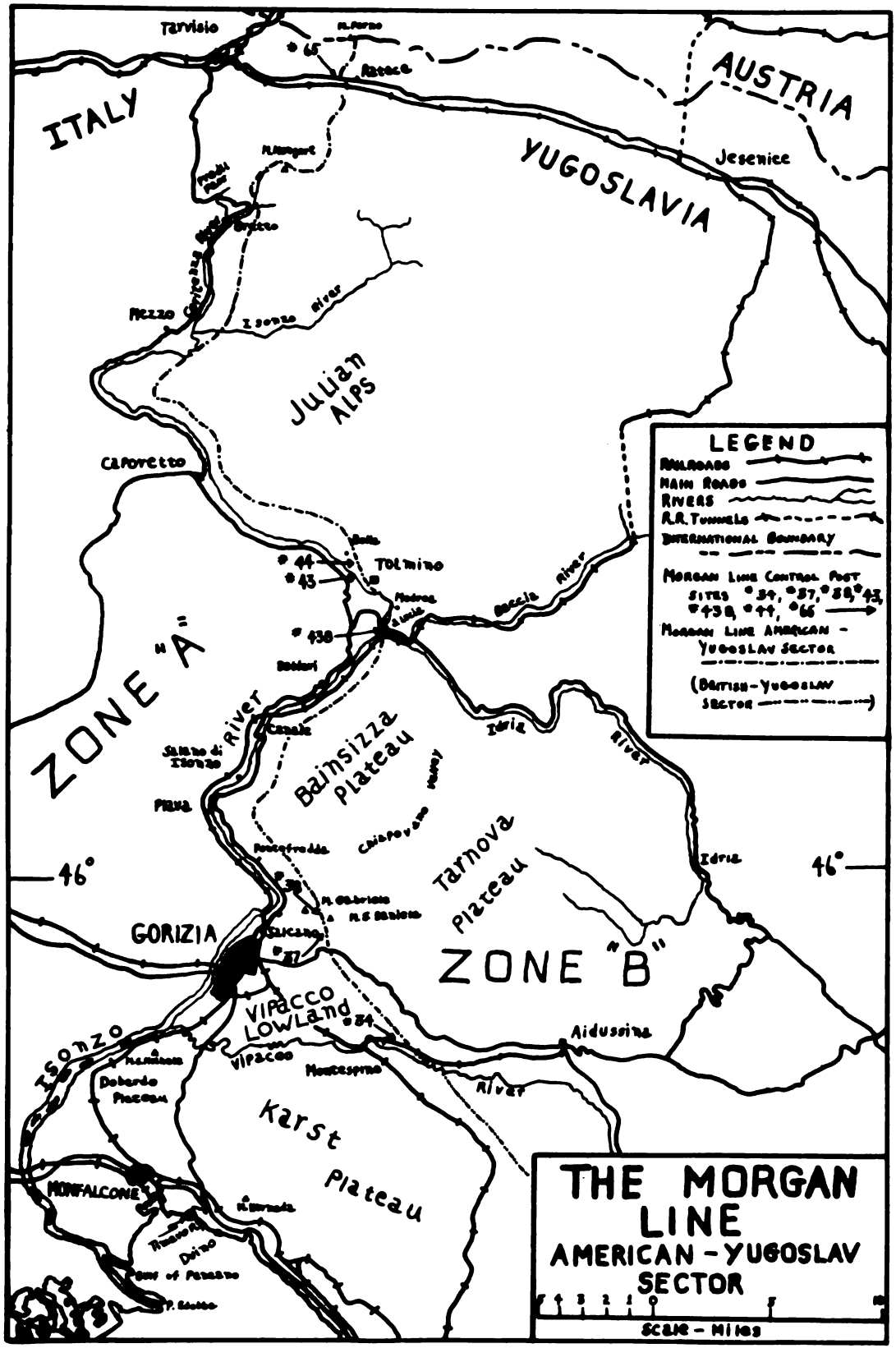
THE MORGAN LINE
AMERICAN - YUGOSLAV SECTOR
SCALE - MILES
LEGEND
RAILROADS
MAIN ROADS
RIVERS
R.R. TUNNELS
INTERNATIONAL BOUNDARY
MORGAN LINE CONTROL POST SITES
MORGAN LINE AMERICAN - YUGOSLAV SECTOR
(BRITISH - YUGOSLAV SECTOR)
ITALY
AUSTRIA
YUGOSLAVIA
Tarvisio
Jesenice
Julian ALPS
Caporetto
Tolmino
ZONE "A"
ZONE "B"
Bainsizza Plateau
Tarnova Plateau
Karst Plateau
GORIZIA
VIPACCO LOWLAND
MONFALCONE
Isonzo
Idria
Aidussina
46°

Fig. 5

Ethnically the area was predominately Slovene. Italians were few in number and confined to the Isonzo River valley. Some Austrian strains were located in the areas north of Plezzo.

The Isonzo-Coritenza Region

The Isonzo-Coritenza River valleys, in the south, paralleled the boundary for fifty-five miles from Salcano north to Bretto (Fig. 5). The position of the boundary was significant here in relation to lines of communications, economic resources and centers of population.

The Isonzo River occupies a narrow tectonic trench from Salcano to San Lucia. From south of Tolmino north to Caporetto the Isonzo valley widens and shows evidence of local glaciation. Its fertility and size is sufficient to support a substantial agrarian populace. From Caporetto north to Plezzo the Isonzo valley narrows again and becomes extremely steep. Except for the small Plezzo basin there is no arable land. Northeast of Plezzo the Morgan Line crosses the Isonzo River. Between Plezzo and the Predil Pass the Coritenza River flows in a deep but broad valley which is completely encircled except at its north and south ends by high, rugged and uninhabited mountains. Principal south-north lines of communication to Austria include the Gorizia-Isonzo-Coritenza-Predil-Tarviso highway, and the Gorizia-Isonzo-Tolmino-Jesenice railway (Fig. 5).

Economic developments included a quarry at Salcano, water purification, filter and pumping station at Fontefredda, cement industry at Salano di Isonzo, hydroelectric power installation and small railway repair shops at Plava, large dam north of Canale, the important Doblari hydroelectric power plant, the dam at San Lucia, the broad and fertile

Isonzo valley from Tolmino to Caporetto, and the alpine grazing and arable farmland of the upper Coritenza valley (Pl IV, Fig's. 1, 2, 3).

The main centers of population were based on one or more of the above or a favorable location on east-west routes or both. Tolmino and Caporetto are good examples of the latter.

The Vipacco Lowland Region

The Vipacco valley is a synclinal depression located between two barren limestone plateaus. From the air it has the appearance of an emerald carpet. The Morgan Line, from control post 34 and Montespino, north to control post 37, severed the north section of the depression for a distance of seven to ten miles (Fig. 5). Except for a few small resistant hills and some marshy and poorly drained areas, the region is relatively uniform. On the whole it contains some of the best arable land in Venezia Giulia (Pl V, Fig. 1). The soil is deep with little or no rock outcropping (Pl III, Fig. 2). The vegetation cover is heavy. The population is denser and more prosperous than in the adjacent plateaus. Land holdings were larger and more numerous than in other areas. Small villages and communal establishments are scattered throughout. Economically the inhabitants both east and west of the Morgan Line were oriented towards Gorizia. Ethnically the area was predominately Slovene with a scattering of Italian-Slovenes and a few Italian land owners and merchants.

The Tarnova-Bainsizza Plateau Region

The Morgan Line traversed the western edges of the Tarnova-Bainsizza karst plateau for a distance of 20 to 23 miles between control

PLATE IV

Fig. 1. Dam across Isonzo River south of San Lucia

Fig. 1

Fig. 2

Fig. 2. Doblari hydroelectric installation on west bank of Isonzo River

Fig. 3. Village of Canale astride the Isonzo River

PLATE V

Fig. 1. An example of the lowland topography crossed by the Morgan Line. Note the broad, flat, arable Vipacco Valley with the high barren Tarnova (karst) Plateau in the background.

Fig. 1

Fig. 2. An example of the plateau topography crossed by the Morgan Line on the western edge of the Bainsizza (karst) Plateau east of the Isonzo River

Fig. 2

Fig. 3. An example of the mountain topography crossed by the Morgan Line east of the Coritenza River valley. The Morgan Line traversed the mountain ridge in upper left. Taken towards the south from Predil Pass.

posts 38 on Mount Gabriele and 43B, south of Tolmino (Fig. 5). The plateau makes a most abrupt and spectacular appearance when approached from the south (Pl V, Fig. 1). After crossing the Vipacco lowland at an elevation of 300 to 400 feet, the heights of Mount Daniele (1717 feet) and Mount Gabriele (2003 feet) indicate the beginning of the plateau.

East and west of the Morgan Line geographic differences are also evident. East of the line the high Tarnova (4401 feet) Bainsizza (3570 feet) plateaus are dominant. Their bleak, rocky surfaces with few permanent streams support only a few impoverished people (Pl V, Fig. 2). The peasants inhabit the valleys and fault depressions such as Chiapovano valley. This karst area has practically no economic value and is completely Slovene in ethnic character. Marked contrasts are found west of the boundary in the Isonzo valley region, discussed above.

The Julian Alps Region

The Morgan Line crossed the northern mountainous region for a distance of 35 to 40 miles, from control post 44 at Tolmino north beyond control post 65 to the Austrian border (Fig. 5). The boundary line generally followed the west facing mountain slopes just east of the Isonzo River valley to Plezzo, thence over the rugged, impassible mountains east of the Coritenza River valley to Mount Mangart (Pl. V, Fig. 3). From there it joined the 1939 Italo-Yugoslav boundary to Austria. This latter six to seven miles of the Morgan Line from the vicinity of Mount Mangart to Mount Forno (4675 feet) was permanently demarcated by concrete markers which required no attention. Except for its crossing the wide east-west Tarviso-Ratece (2647 feet) glacial valley at the north-most Morgan Line control post 65, this distance was

practically uninhabited. Intervening mountain peaks reach over 6820 feet in elevation.

East of the Morgan Line to the Austrian border the entire mountainous region was very sparsely inhabited. Lumbering on the forested slopes of the Julian Alps and some grazing and small farms in the valleys supported the few inhabitants. Ethnically the people are Slovene with the exception of an Austrian strain making up a small minority amongst the older inhabitants.

Demarcation Procedures and Problems in Three Diverse Geographic Areas

Preliminary Planning, Personnel and Equipment

The necessity for a definitive joint demarcation along the Morgan Line boundary was realized by those immediately concerned with its administration. In the early fall of 1946 a request for permission to discuss the subject with Yugoslav authorities was initiated by the local American Division to the senior Anglo-American headquarters in Venezia Giulia. Approval was secured and direct coordination effected with the Yugoslav Military Mission to Zone "A".[10] The problem and necessity for joint demarcation was discussed at a subordinate level between American and Yugoslav Mission personnel and work commenced immediately with practically no preliminary planning or formalities.

Although working relations between the respective representatives were somewhat stilted when work began, an amiable relationship developed after a few days. Much of the success of the latter is attributed to the following: both teams were fully empowered to make minor on-the-spot decisions, splendid cooperation was shown towards the Yugoslav and

American personnel by American and Yugoslav troops and local inhabitants along the line, language interpreters on both teams completely surmounted any language barriers, and early in the marking survey work all concerned realized that a mutual advantage would be realized from the efforts being put forth. Each questionable situation was debated at length and a compromise was reached, often based on geographical consideration. Had not both parties, unconsciously or not, accepted the geographic realities of the area as basic, it is doubtful whether the marking survey would have progressed much beyond the first day.

The Yugoslav Military Mission demarcation team consisted of three officers and drivers.[11] These officers arranged for necessary Yugoslav labor details from troop units along the boundary line.

The American field team consisted of an officer in charge, a number of American officer assistants and drivers.[12] American work details were also provided from units along the line.

Each team furnished its own transportation. Necessary equipment was furnished by American sources and included: shovels, axes, saws, sledge hammers, hatchets, surveyors tape, red paint, paint brushes, metal stakes and lensatic compass.

Maps

Two different scaled maps were utilized throughout the marking survey; 1:25,000 and 1:100,000. The large scale maps were from a single source, Anglo-American which precluded possible discrepancies on maps from different origins. This latter was a difficulty when working with the official small scale maps (Duino conference maps).

The two official small scale maps depicting the Morgan Line were from different sources. The map used by the Anglo-American officials was of Italian origin, while that used by the Yugoslav officials was believed to have been German or Austrian. Although the Morgan Line matched well on both maps, the topography shown on the respective maps did not always coincide.[13] In some instances the map to ground relationships differed as much as 300 to 400 yards. In the lowland area of the Vipacco valley the map-line-terrain relation on both maps was without fault. However, in the plateau and mountain areas obvious discrepancies existed between the two maps. Broad interpretation, thorough ground investigation, and compromise in transposition onto the large scale maps were necessary in order to resolve such cases. The transposition of the line from the small scale to large scale maps in sloping mountainous or plateau topography was also a problem. Here greater ground distances were involved in the consideration of decisions than in the flatter terrain of the lowland areas.

The large scale 1:25,000 map sheets were used principally for detailed on-the-spot identification of ground features which were traversed by the line depicted upon the official small scale maps. The line(s) was transposed from the small to large scale map. This required careful preliminary comparison, study and interpretation of the official map in order to detect differences in map-line-terrain relationship. Then ground reconnaissance was made to confirm the identification of features shown on the large scale map.

After the line was finally demarcated on the ground it was indicated on the large scale map sheets by a thin line. The latter served as the only informal recording of field decisions. Fortunately this

procedure proved satisfactory, but, in retrospect, it is by no means advocated for demarcation of boundary lines permanent in nature. In that event accurate survey, numbering, reference identification, etc., of each point is recommended. A detailed example which follows will illustrate the map and field problems in more detail.

Demarcation Characteristics Common to the Entire Boundary

Throughout demarcation certain problems, solutions and practices were applicable to each of the three areas traversed. Probably the foremost aspects of the demarcation were the objectives or problems which the joint demarcation teams set out to accomplish or alleviate. Namely these involved providing the answers or solutions to the following questions: Specifically where is the exact location of the boundary line on the ground? Do identity cards of inhabitants living in the near vicinity of the boundary reflect the correct zonal designations with respect to the boundary line?[14] Can occupational administrators definitely distinguish where their responsibilities or jurisdiction on the ground begin or end? Do the soldiers on duty at the control posts or those patrolling the areas between the posts know how far east or west their duties permit them to go without jeopardy? The mission of the demarcators was to ease these undesirable conditions insofar as practicable.

A significant feature of the demarcation proceedings throughout the entire area was that not one single inhabitant along the boundary was interviewed with respect to his residential choice of zone.[15] Justification for not including interviews was as follows: (1) the

boundary was based upon military premise not political, (2) the Morgan Line was to be temporary in nature pending final peace settlement, and (3) it was felt that interviews might not result in free expression of thought.

The demarcators decided to commence demarcation proceedings at the south end of the American sector for three reasons. (1) Initially it constituted the shortest distance for each team to travel. (2) The fairly uniform terrain of the Vipacco depression would be easiest to negotiate. (3) It was believed demarcation would be simple and that few problems would evolve in the arable, well populated lowland area. Once work began in the field the latter reason proved to be completely erroneous. More problems requiring minor adjustments and deviation within the confines of the respective lines were encountered here than in the plateau and mountainous regions combined.

Most every conceivable means was used for demarcation as long as the line could be made readily identifiable and visible. Metal stakes; three language sign boards, houses, barns, painted rocks, stone culverts, fences and walls, painted trees, ditches, streams, small hill tops, precipitous river embankments, roads, trails, footpaths, cultivated fields, ravines and cuts, mountain roads and trails, a river and lake, rows of trees, saddles, crests of mountains and ridges and cliffs were used at one time or another to assist in depicting the entire boundary on the ground. In each area, however, the technique differed due to the local geography.

Both American and Yugoslav military units in the areas were charged with surveilance of all identifying markers and reporting requirements for maintenance or replacement as necessary. American and

Yugoslav unit commanders were thoroughly briefed on the location of the line in their respective areas of responsibility by either ground inspection or orientation on a large scale map.

No doubt the most unique aspect encountered throughout the entire demarcation proceedings was the complete lack of major economic, ethnic or strategic complication. Except in the lowland the economy of the immediate boundary area raised little question. Ethnically the population was principally Slovene. Most all local decisions were readily reached in all areas by means of analysis of basic land usage.

A Sample Demarcation Problem

An example of the procedure followed in the field will indicate the variety of problems which confronted the demarcation parties. It will also show the mechanics of demarcation and the role of geography in decisions made.

The area southeast of Montespino, near Battuglia, will serve as a sample (Fig. 6). The demarcation teams rendezvoused at the road junction in the village of Montespino and proceeded towards the Morgan Line boundary and control post 34 (Pl. III, Fig. 2). At this point the respective official small scale maps with the boundary traced thereon were consulted. A readily identifiable ground feature on or near the boundary line, a small railroad station, was selected as an initial reference point. Both of the official maps of this area coincided exactly.

From the maps it was obvious that the railway station was in Zone "A". Ground reconnaissance of the area ascertained that the road and trail network in the vicinity of the railway station was oriented more

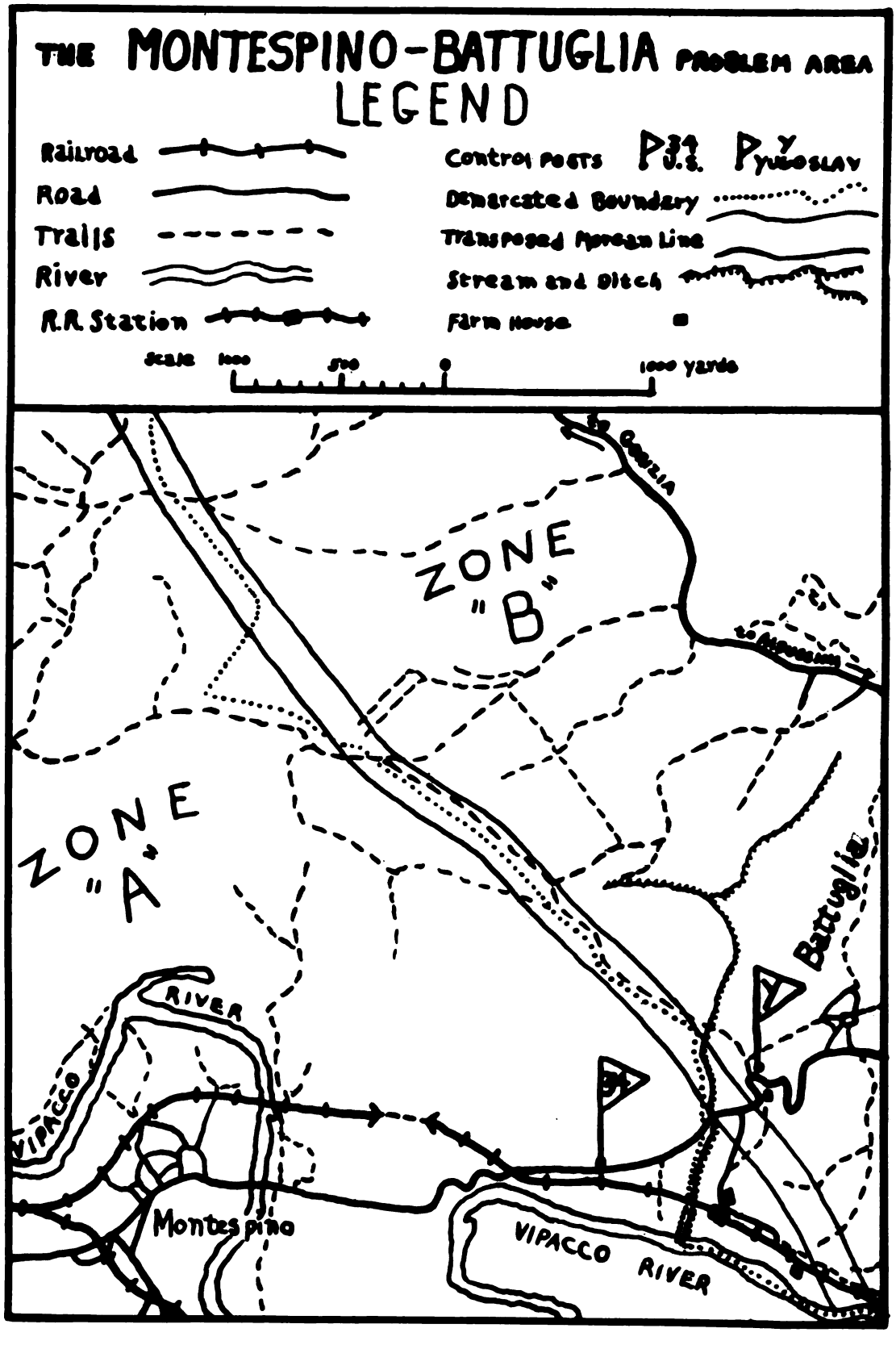
THE MONTESPINO-BATTUGLIA PROBLEM AREA
LEGEND
Railroad
Road
Trails
River
R.R. Station
Control Posts
U.S.
Yugoslav
Demarcated Boundary
Transposed Morgan Line
Stream and Ditch
Farm House
Scale
1000
500
0
1000 yards
ZONE "B"
ZONE "A"
RIVER
VIPACCO
Montespino
VIPACCO RIVER
Battuglia

Fig. 6

towards Zone "B" rather than Zone "A". The same was also true insofar as the local population was concerned. The farmers located north and east of the railroad station tilled the land across the north-south road west of the station as far as the intermittent stream and ditch (Fig. 6). Agreement was reached to demarcate the boundary, shown by the dotted line, west of the stream embankment from the Vipacco river north to the northeast-southeast trail thence north along its west edge (Fig. 6).

Note the location of the American control post 34 and the Yugoslav post opposite with respect to the official boundary after it was transposed to the large scale map (Fig. 6). The distance between each was about 900 yards.

Final demarcation in the area included moving the three language sign east along the road to the demarcated location and placing stakes north and south therefrom. Both American and Yugoslav military personnel charged with surveilance of the area were thoroughly briefed and shown the boundary location upon the ground. Due to military consideration neither of the original control posts were moved closer to the demarcated boundary. However, insofar as the actual demarcation proceedings were concerned military considerations played absolutely no role. Both demarcation parties were fully aware that an amiable demarcation could only take place in the face of geographic considerations.

The foregoing is but one example. The mechanical procedures were similar throughout the demarcation but each problem was made unique by virtue of the geographic phenomena encountered.

Demarcation Problems in Three Diverse Geographic Areas

Lowland.- The principal demarcation problems which evolved in the Vipacco area had to do with the location of individual farms and cultivated properties, both large and small. Circumventing small farms and their facilities such as houses, barns, wells, priveys, cultivated fields and property lines was a major problem but attempts were made to keep them entirely entact. A farm whose house or barn was located in one zone and whose fields and water were located in the other zone was placed under the same occupational administration if possible. In a few instances sizable cultivated fields of large holdings had to be severed in strict accordance with the center of the map line. Market sources, access routes thereto, farm organization and size were given primary consideration in all decisions.

Irregularities of the demarcation line in the lowland area were abundant. Streams, drainage ditches, roads, trails, treelines, culverts, edges of cultivation, stone fences and small hilltops served to identify and demarcate the line on the ground. Maximum use was made of metal stakes as markers throughout which was not true in the plateau and mountain areas.[16]

Plateau.- Instead of having to consider the ground disposition of numerous scattered farmsteads and cultivated fields in respect to the demarcation line as in the lowland, the geography of small communal establishments though isolated and few in number had to be carefully considered in the plateau area. Terrain features became more significant. The location of access routes, west of the boundary as well as winter shelters east of the boundary were considered in all decisions.

A special problem arose in the San Lucia-Modrea-Tolmino-Dolla area between the north end of the plateau region and the south end of the mountain sector due to three distinct reasons (Fig. 5). First, each official map line did not correspond as far as position of land forms. They differed as much as one quarter of a mile. Secondly, the Tolmino basin was a communication center of note as mentioned above and as such densely inhabited. Thirdly, the exact relation of the Isonzo River and the lake at Modrea to the boundary was in doubt. A compromise was finally reached.

The demarcation line was established from the center of the bridge at San Lucia, the lake at Modrea, the Isonzo River to a point just south of control post 43, thence from the Isonzo River northeast towards Dolla (Fig. 5), (Pl. III, Fig. 3). Joint use of the waters was contemplated even though the respective shorelines were the occupational authority limits. Although this resulted in a rather loose demarcation of the boundary, it was the only satisfactory compromise that could be agreed upon. Other problems throughout the plateau area were rather insignificant insofar as cultural aspects were concerned due to the almost complete lack of population along the line proper.

Mountains.- Other than negotiating the more difficult terrain as far north as Plezzo and resolving map-ground discrepancies, the line north from Tolmino was identified and marked on the ground without major provocation. It became more and more apparent when working in the uninhabited mountainous areas that geographic features served extremely well for interpretation and identification of the line from the map to the ground. These same features were also of value in reaching decisions

for adjustment and subsequent identification of the boundary on the ground in the demarcation process. For this reason, from the vicinity east of Caporetto north to the Plezzo basin natural features were utilized almost entirely to identify the line on the ground.

North of Coritenza di Plezzo the ruggedness of the terrain (over 6,000 feet) proved difficult to negotiate. It was jointly agreed that the length of time required to identify and demarcate the line over the mountainous peaks, the complete lack of habitation in the area and absence of communication routes across the line precluded any justification of the effort involved. Therefore, between Coritenza di Plezzo and Mount Mangart the boundary line was identified but unmarked upon the ground, except where it crossed the valley formed by the upper Coritenza River northeast of Bretto (Fig. 5). The permanently demarcated 1939 Italian-Yugoslav concrete boundary markers served as ground identification of the Morgan Line boundary for the remaining distance to the Austrian border.

Summary.- To briefly sum up the results of the demarcation proceedings along the Morgan Line the following was accomplished. The line was jointly identified and/or marked on the ground along its entire length. It took on a linear aspect, rather than zonal, which eliminated ambiguity for all concerned. It resulted in fairly harmonious relationships thereafter. Most direct results insofar as American military units along the line were concerned were the elimination of certain posts deemed unnecessary for control purposes, scaling down of patrol activities along the line, lessening of tensions, and specific knowledge of the limits of jurisdiction.

Each of the three geographic regions, Vipacco River valley lowland, karst plateau and Julian Alps mountains, necessitated the assessment of different geographic values insofar as decisions for on-the-spot demarcation were concerned. The type of land use and density of people differed in each region and had to be considered accordingly. Identifiable geographic features, more pronounced in the highland areas, were an asset rather than deterrent to ground demarcation. Access routes and key terrain features were more significant in the plateau area and especially so in the mountainous region. The ethnic character was predominately Slovene along the entire Morgan Line boundary and posed no special problem. The economic complexity of the area was a problem only in the Vipacco valley.

The importance of military and political aspects which constituted the principal justification for the boundaries' existence was a source of major concern prior to demarcation. However, throughout the demarcation proceedings these two aspects were very much subordinated to the geographic character of terrain and land use.

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[1] See Explanatory Notes in Bibliography, p. 82.

[2] See New York Times under Other Sources in Bibliography, p. 88.

[3] The author does not wish to leave the reader with the impression that administration and surveilance of the occupied territory west of, or along the established Morgan Line was inadequate or without purpose throughout these trying periods. On the contrary the Allied military occupational administration of the area functioned very efficiently.

[4] Italian Affairs - Documents and Notes, Rome: Documentary Centre, Vol. II, No. 6, November, 1953, p. 86.

[5] Robert W. Kromer, Civil Affairs and Military Government in the Mediterranean Theater, Washington, D.C.: Office Chief Military History, File No. 2-3.7, AX, C2, Chapter XV, "The Occupation of Venezia Giulia," no date, p. 33.

[6] Duino Agreement documents have not been made public by the U.S. Department of State. However, a downgraded (declassified) copy of the original text and map were made available to the author by The Adjutant General's Office, U.S. Department of Army. Therefore, it is possible to evaluate its provisions in comparison with the Belgrade Agreement.

[7] Kromer, Op. cit., p. 39.

[8] Information concerning the initial location or establishment of Anglo-American and Yugoslav boundary control posts was not included in either Agreement.

[9] The total number of control posts established was entirely dependent upon necessity surrounding current situation.

[10] Paragraph 3 of the original Belgrade Agreement (Appendix C) provided for a small Yugoslav mission of observers to be attached to the senior Anglo-American Headquarters in the area (British Eighth Army at the time) as observers. During this period the senior Anglo-American Headquarters, located at Duino, Italy, was the British XIII Corps.

[11] The Yugoslav officers included one Major, one Captain and one First Lieutenant. The latter two spoke fluent English. All three spoke Serb-Croat and Italian, and some German. At least two officers were in the field at all times.

[12] The American Captain in charge throughout the marking survey spoke English and poor Italian. All American officer assistants were Serb-Croat and/or Slovene linguists. Their presence and linguistic abilities proved invaluable in establishing workable relationships.

[13] Both maps were of a topographic type. The most accurate map from the standpoint of geodetic survey is unknown. Investigation showed, however, that the respective map lines could be closely matched in most all instances. During the marking survey, neither party questioned the comparative validity of the other's map, or the authenticity of the lines drawn thereon. Where discrepancies occurred, compromise adjustments were made based upon geographic realities. Resolving a verification of two different maps and lines during field demarcation would have resulted in nothing more than needless delay or complication of the marking survey proceedings.

[14] Although most Zone "A" and Zone "B" inhabitants possessed identity cards, of one type or another, the documents of individuals living in close proximity of the boundary area did not always coincide insofar as relationship between residence and boundary location.

[15] Even though the Yugoslav officials were prone to have this done, American authorities thought it best not to conduct interviews under a situation of circumstances which might have had a prejudiced effect, or later detrimental repercussion upon the local inhabitants.

[16] The wooden three language sign boards made excellent firewood for local inhabitants, or were subject to vandalism. No three language signs were erected other than where either an American or Yugoslav control post could keep it under direct surveilance.

CHAPTER IV

THE ITALO-FTT PROVISIONAL BOUNDARY

In contrast to the Morgan Line Agreement, the Italo-FTT boundary had its inception as a part of the formal Italian Peace Treaty negotiations for the final settlement of the entire post war Venezia Giulia boundary question. Specific information was published relating to all aspects of its delimitation and demarcation.

The delimitation description of the Italo-FTT boundary and provisions for its subsequent demarcation were included in the body of the Italian Peace Treaty (Appendix E). As previously mentioned the delimitation was defined by both word and map. The provisions for demarcation were explicit. However, certain questions arose during the provisional demarcation due to the use of vague terminology in definition or absence of instructions concerning geographic realities peculiar to a small segment of the short boundary.

Geographic Aspects

The provisional land boundary between Italy and the FTT though less than four miles long occupied a geographic location of significance (Figs. 3, 7). With the exception of the very narrow and small coastal fringe, the area is dominated by karst topography. The most important single geographic feature of the entire locale is the Timavo River itself. Just south of the former provisional boundary, in the FTT and

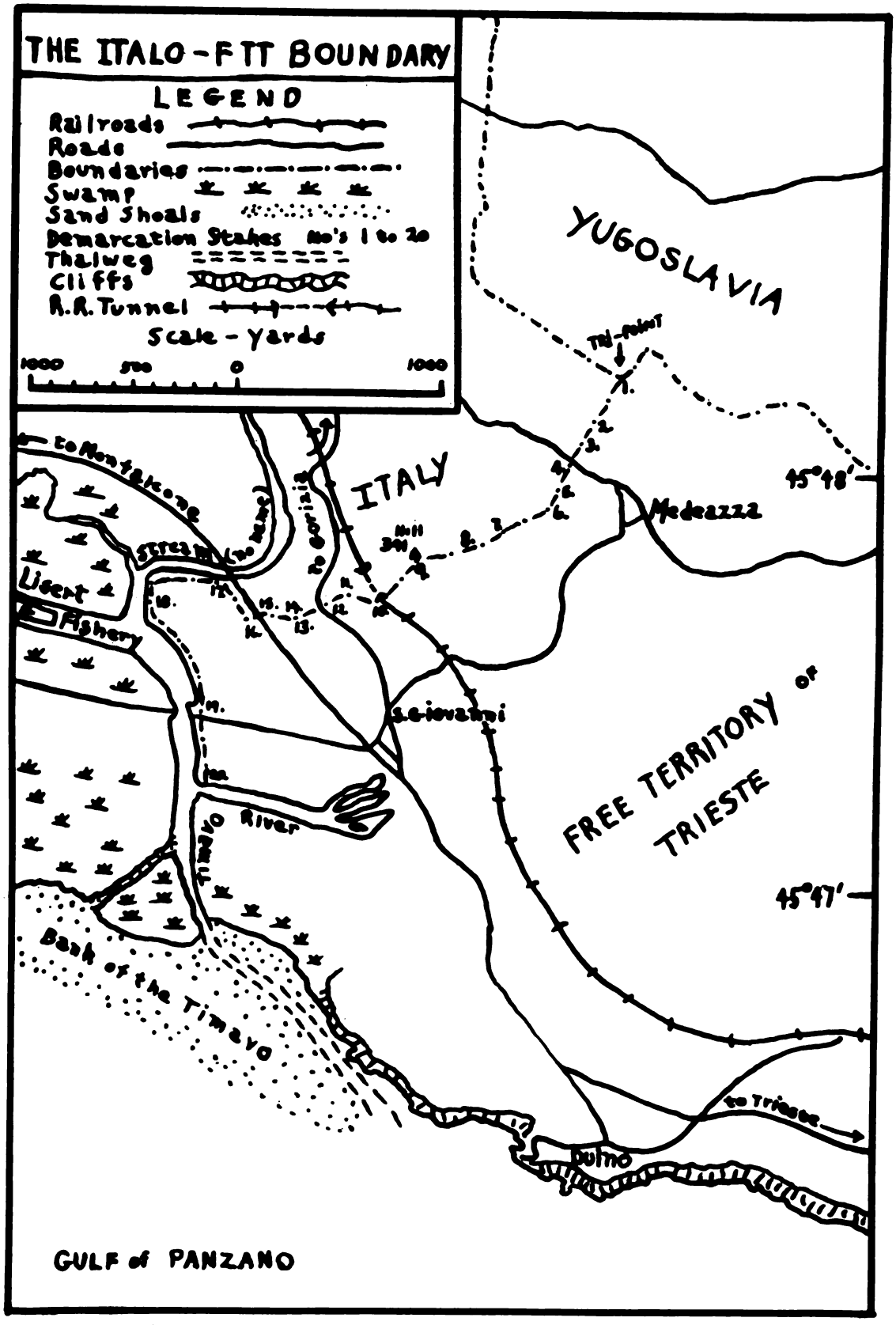
THE ITALO-FTT BOUNDARY
LEGEND
Railroads
Roads
Boundaries
Swamp
Sand Shoals
Demarcation Stakes No's 1 to 20
Thalweg
Cliffs
R.R. Tunnel
Scale - Yards
1000
500
0
1000
YUGOSLAVIA
Tri-point
ITALY
to Monfalcone
Stream
Lisert
Fisher
Medeazza
45°48'
S. Giovanni
FREE TERRITORY OF TRIESTE
River
Timavo
45°47'
Bank of the Timavo
to Trieste
Duino
GULF of PANZANO

Fig. 7

adjacent to the point where the main highway from Trieste branches off towards Monfalcone and Gorizia, the Timavo River, which is the largest of all subterranean rivers in the Venezia Giulia area, gushes out from beneath the road and rocks at the rate of 2,300,000 cubic meters per day.[1] This phenomena which is peculiar to karst limestone formations had its origin where the stream disappears beneath the ground about 20 miles to the southeast. The size of the tremendous underground drainage network in the limestone formations is indicated by the fact that where the stream disappears into the ground 90,000 cubic meters daily have been measured as compared to the 2,300,000 cubic meters at its exit.[2]

The highways and railways which cross the narrow stretch between coastline and the edge of the karst are of major importance. The main highways between Trieste and Monfalcone, Italy, and Trieste and Gorizia, Italy, meet at San Giovani. The main line railroad between Italy, Trieste and Yugoslavia parallel the aforementioned highways. All of these communication facilities funnelled through a quarter mile bottleneck at the border between the coastline and the rough karst terrain.

The border economy was extremely poor and barely supported an estimated 1,500 inhabitants through fishing, subsistence farming and public service. Ethnically the population was intermixed, partly Italian and partly Slavic.

The principal small settlements in the immediate environs of the boundary included: the coastal fishing village of Duino; the peasant farming village of Medeazza on the edge of the karst, and the built-up area of San Giovani whose few inhabitants tended the Timavo water purification and pumping station facilities in the vicinity. A

privately owned and constructed Italian fishery called the Lisert was located to the northwest of and adjacent to the Italian side of the boundary. It had its connection with the sea through a stream (no name) and the Timavo River to the south (Fig. 7).

The soils are extremely thin with rock strewn every few feet except at the bottom of the depressions and near the sea where it has collected over the years. The land is practically devoid of trees and other vegetation cover except sporadic scrubs and willows near the small lowland area of the Timavo River.

Mount Hermada, Mount San Michele, the Dunio Castle and Doberdo plateau fortifications from World War I are grim reminders of the bloody battles fought between the Italians and Austrians for control of this important section which controls the land gateway into Trieste from the West. (Fig. 5).

Demarcation Procedures and Problems

The initial meeting of the Mixed Commission for the demarcation of the provisional boundary between Italy and the FTT got underway in mid July 1947. U.S., U.S.S.R., U.K., and France represented the FTT. An Italian delegation represented Italy.

Planning

The Italian representative announced acceptance of procedural matters previously proposed by the FTT delegation with minor reservations. Joint agreement on procedures for discussions on demarcation were reached with little or no controversy. Representative

subdelegation experts were to be appointed by each delegation to perform the actual demarcation.

Methods under which the demarcation experts would accomplish their mission were agreed upon by the Mixed Commission prior to movement into the field. Demarcation was entrusted entirely to the subdelegations. The chiefs were to jointly determine the exact plan for field work. Agreements reached between the subdelegate chiefs regarding normal phases of work in the field, including necessary alterations in conformity with Article 4 (Appendix E) of the treaty was to be binding on both delegations. However, agreements reached regarding specifications in paragraph 5, Article 5, of the treaty, would be subject to confirmation by respective superiors in later meetings of the Mixed Commission. In the event the subdelegation chiefs were unable to reach agreement, each would make a written report of all particulars to his respective superior.

The composition of each field team was to include a chief, topographic expert, secretary-interpreter and two soldiers. Because of qualified personnel shortages, the subdelegation of the Free Territory decided it could operate without an interpreter. The base of operations for the subdelegations was designated as Trieste.

The first step was the transposition of the treaty boundary line to 1:25,000 scale maps prior to field work. The base maps in the possession of each subdelegation differed somewhat however. The Italian version of the Duino-Aurisina map sheet (1937 Italian edition) and the FTT version of the same sheet (1945 British edition) were dissimilar in the area of the lower reaches of the Timavo River. It was agreed that both versions of maps would be utilized for the initial transposition

and field work from the predetermined tripoint between Italy, Yugoslavia and the FTT to a point about 275 yards southwest of the Trieste-Monfalcone highway. In the meanwhile steps would be taken to secure aerial photo coverage of the lower Timavo in order that both versions of the 1:25,000 Duino-Aurisina base map sheets might be corrected.

Transposition of the written text and appended small scale map of the Peace Treaty to the 1:25,000 scale map sheets was accomplished with no great difficulty. The line was first plotted onto the 1:25,000 map sheet from the written text description. It was transposed exactly as written except that ambiguous wording such as approximately, southerly and parallel was made more precise.

Secondly, the treaty's appended small scale, 1:100,000 map which had the boundary depicted thereon as a line 1/25 inch in thickness was utilized to bring the previously transposed and thinly inked descriptive line into adjustment on the 1:25,000 map. This latter step was accomplished by close inspection and interpretation, utilizing the center of the small scale map line as a guide in most instances. This proved entirely satisfactory to parties concerned except at the Timavo River. It was agreed that until aerial photo coverage was secured it would be left in abeyance.

Procedures

All boundary markers were placed on clearly visible terrain. They consisted of hardwood stakes 24 inches long and four inches in diameter. Each was driven 20 inches into the ground with four inches protruding. If a natural object or stone served as a better substitute for the

boundary marker, it was utilized. If rocky terrain prevented driving a stake into the ground, a painted circle eight inches in diameter with a six inch cross inside was utilized. The tripoint (Italy-Yugoslavia-FTT) marker was designated as number one (arabic numeral). The location and recording data for the tripoint was identical with the Peace Treaty provisions. Other markers were numbered successively in a southwesterly direction from the tripoint.

The position of each marker was established by three reference points. These were designated alphabetically in a clockwise direction. The distance and magnetic bearing from reference points to the boundary marker were recorded and, if necessary, the distances between the reference points measured.

A form was completed in the field for each marker established (Appendix F). Only in two cases was the topography such that a sketch was necessary for clarity. The location of each marker was indicated by azimuthal and back azimuthal bearings and geographical and rectangular coordinates.

Signs were erected which were readily visible and identifiable from a distance and as close to the actual boundary markers as possible. The sign posts consisted of two 6 foot lengths of 4 x 4 hardwood stakes to which were attached two boards 10 x 12. On the FTT side of the board the letter "T" was painted. On the Italian side of the board the letter "I" was used. Where signs could not be driven into the ground, two mounds of stones served to hold the signs erect. All materials (markers, reference points and signs, etc.) were provided by the Italian subdelegation, the cost of which was equally divided between the two delegations.

Official records were maintained in both English and Italian. Details of each marker were recorded separately on the form mentioned above. They were signed by the chiefs and topographers of each subdelegation. The final map of the provisional boundary line with the geographical location of each boundary marker was indicated on the corrected 1:25,000 Duino-Aurisina base map sheet. These too were authenticated by the chiefs and topographers of the respective subdelegations.

Upon completion of the subdelegation's demarcation work in the field, the final assembly of the entire file of records and maps into one document was left to decision by the Mixed Commission of delegates.

Problems

Demarcation of the boundary presented few problems. The only problem of major consequence was in the lower portion of the Timavo River. Other minor problems were resolved on-the-spot to mutual satisfaction.

Demarcation commenced at the tripoint and moved in a southwesterly direction across numerous small saddles to the vicinity of hill 341 (Fig. 7). Between these two points portions of the fields cultivated by the residents of Medeazza became separated from the FTT. Consequently it was necessary to draft provisions providing the village residents free access and privileges to till their land without restriction up to one mile inside the Italian frontier.

No other complications arose until the Trieste-Monfalcone highway was reached. Description of the boundary southwest of the highway was vague (Item ii, Article 4, Appendix E). A large alluvial strip of fertile cultivated land southwest of the highway posed a problem. Study

of the terrain revealed a large drainage ditch about 30 feet southwest of the highway. The ditch ran parallel to the latter and emptied into a stream a short distance to the northwest. The lower course of the stream made a horseshoe bend to the west and south around the arable land before it joined the Timavo in its course to the sea (Fig. 7).

Rather than sever the large peninsular shaped field west of the highway into two parts, proposal was made to demarcate the boundary around the outside perimeter of the arable soil. This would leave the entire stream, Italian fishery and both embankments as far south as the ninety degree bend in the Timavo River in possession of Italy. The fertile land would be retained by its FTT users. This proposal constituted a major deviation from the text, but was within the limits of paragraph 5, Article 5, of the treaty (Appendix E). This particular segment of the line was demarcated upon the top of an artificial dike-like levee surrounding the periphery of the field. The stakes were purposely placed a considerable distance away from the course of the stream. This was done in order to preclude any question which might arise at a later date due to possible changes in the levels of the stream. Detailed sketches and verbal descriptions were prepared for documentation.

As mentioned previously the lower Timavo posed a major map problem from the very beginning. The 1:25,000 base maps did not conform to the terrain and had to be corrected by aerial photography. The text and map of the treaty did not specifically define the location of the boundary with respect to the Timavo itself, i.e. east or west, median, or thalweg line.[3] To make more complicated an already difficult situation, the air photos revealed a peculiarity in the thalweg of the Timavo

after it left lands end (Fig. 8). It hugged the FTT shoreline for quite a distance before reaching deeper water. At low tide sand shoals barred the entrance to the Timavo for small fishing vessels from any other direction except by way of its thalweg. At high tide small flat bottomed boats could negotiate the entrance of the Timavo from all directions.

The geography surrounding the area was studied in detail by air, land and water reconnaissance. No satisfactory solution to the problem could be reached by the subdelegate chiefs. The west side of the Timavo as a boundary was not acceptable to the Italians because of the Italian fishery and the possible future development of the maritime activities of Monfalcone. Likewise a boundary on the east side would be of little use to them unless the thalweg along the FTT shoreline were included.[4] However, a thalweg line was not in the best interests of the FTT residents who gained a livelihood from fishing. Although the latter was a workable solution for the use of the Timavo, it would have deprived the Duino (FTT) residents of a great deal of fishing area and rights.

A compromise for joint usage and control of the area in question was finally agreed upon as the only practical solution. It was recommended to the Mixed Commission that demarcation from the lower reaches of the Timavo (south from stake No. 20) into the gulf of Panzano be left in abeyance until decided by higher authority (Fig. 7). Until such decision was reached the south extension of the Timavo, together with its underwater channel into the gulf of Panzano could be jointly utilized and controlled so not to disturb the livelihood of local inhabitants. No evidence has been uncovered which later altered this arrangement.[5]

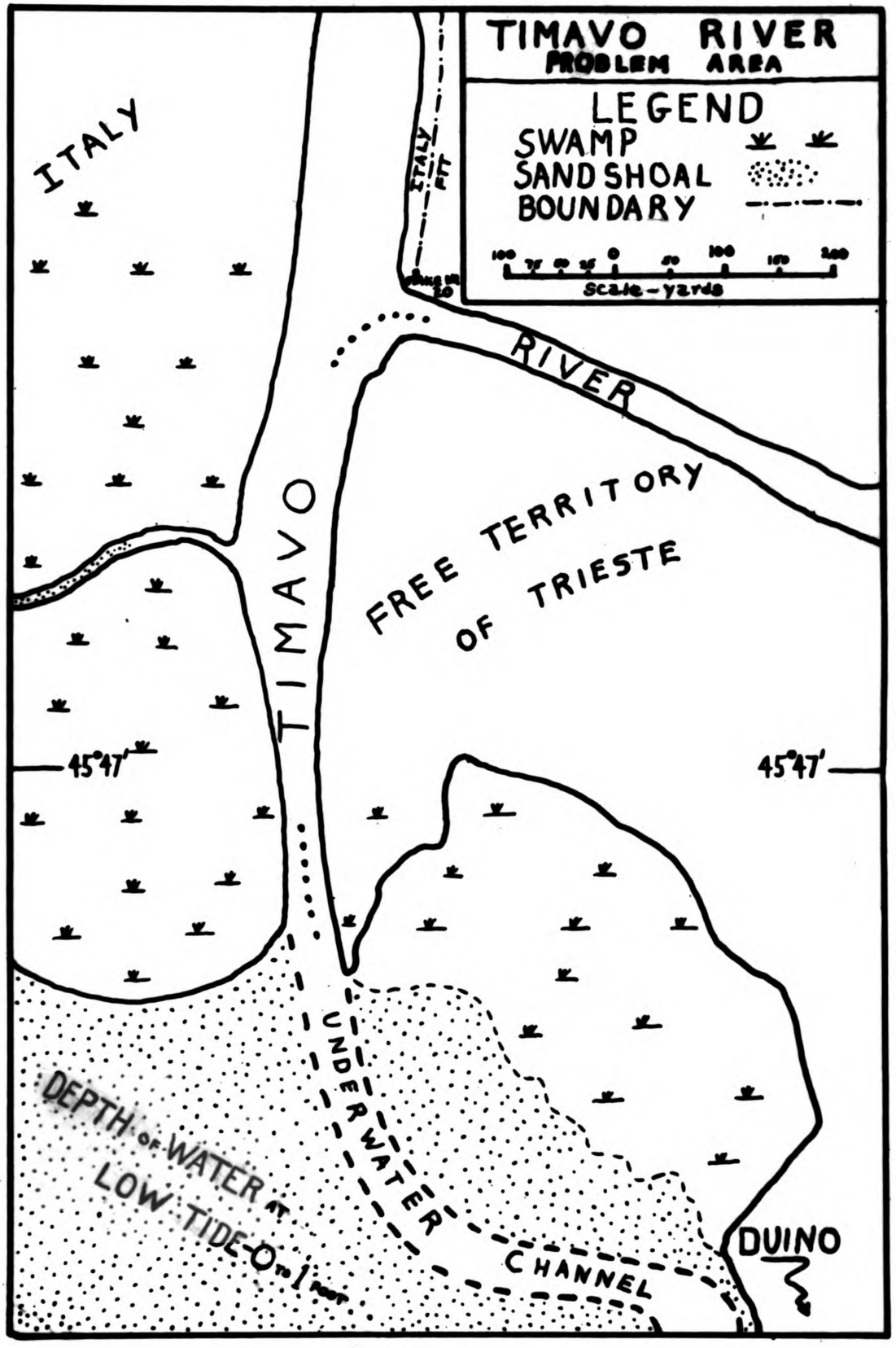
TIMAVO RIVER
PROBLEM AREA
LEGEND
SWAMP
SAND SHOAL
BOUNDARY
Scale - yards
ITALY
ITALY
RIVER
TIMAVO
FREE TERRITORY
OF TRIESTE
45°47'
45°47'
UNDERWATER
CHANNEL
DEPTH OF WATER AT
LOW TIDE 0 to 1 foot
DUINO

Fig. 8

Summary

The demarcation of the provisional boundary between Italy and the FTT was accomplished with little difficulty. The task was accomplished in less than four weeks due to the amiable working relationship between demarcation personnel. Prominent geographic features were again a great asset in determining the location of individual boundary markers. The major demarcation problem of the Timavo River area which did arise is attributed to questionable description which defined the delimitation aspects of the boundary.[6]

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[1] Moodie, Op. cit., p. 37.

[2] Ibid.

[3] The term thalweg used here refers to the deepest continuous under water channel or a line joining the lowest points of the river bottom from its source into the sea.

[4] Another under water channel into the Timavo River mouth no doubt could have been dredged across the sand shoals by the Italians from a southwesterly direction.

[5] Since the Italo-FTT boundary was dissolved in favor of Italy in October 1954 this factor no longer presents a problem. However, the following was reported in the revised edition of the 1950 Trieste Handbook, (Op. cit, p. 56 (supra p. 18)) "With the assistance of the Marshall Plan a fishing village and fishermen's center is being built at the mouth of the Timavo River north of Duino. The village will have modern two-apartment houses for fishermen's families, a repair shop for their gear, and a large refrigeration plant.

[6] Major General Ridgely Gaither, U.S. Army, who was the senior U.S. delegate to the U.N. Boundary Commission during the 1946-1947 Italian Peace Treaty demarcations (Italo-Yugoslav, and Italo-Yugoslav-FTT boundaries) attributed a great many difficulties in demarcation to the use of vague terminology of words, phrases and map designations. Personal interview, Pentagon Building, Washington, D.C.: September 16, 1955.

CHAPTER V

SUMMARY AND CONCLUSIONS

Venezia Giulia is a region rich in geographical complexities which have had a direct bearing upon its historical boundary problems and disputes. Its compact shape and geographic location give it a strategic importance in boundary affairs out of proportion to its small size. Venezia Giulia constitutes a tension area in a sector of Europe renowned for boundary instability. Physiographically, climatically, and ethnically, it has transitional characteristics. Lacking good natural resources, its economic well being is contingent upon neighboring areas. Thus Venezia Giulia possesses many characteristics favorable to a study of boundary geography.

Boundary Geography

The term boundary geography has been defined as a study of the science of regions rather than lines. This fact alone makes the regional geographer an authoritative source on boundary affairs, or in effect a boundary expert in his own right. Certainly the geographer is well-equipped to furnish a valuable contribution to the solution of boundary problems.

Comparison of the Morgan Line and Italo-FTT Boundary

The differences between the two boundaries fall under three main headings: (1) the general situations surrounding their existence, (2) their origins and purpose, and (3) their provisions for delimitation and demarcation.

The unfavorable situation surrounding the creation, establishment and later administration of the Morgan Line had an adverse effect upon its existence as a boundary, whereas the opposite was true in the case of the Italo-FTT boundary.

The Morgan Line was hastily derived under trying military and political conditions. It was drawn up as a temporary boundary pending final peaceful settlement of the Venezia Giulia question. It was arbitrary in nature, military in scope, but political in essence. The Italo-FTT boundary was conceived as part of the final Italian peace settlement during a more favorable period. It was given the best treatment commensurate with permanent boundary-making protocol. It was afforded the benefits of ethnic and economic consideration plus careful geographic investigation and debate.

The delimitation defining the Morgan Line boundary included a line upon a map plus other administrative provisions, but no instructions pertaining to investigation or demarcation. The Italo-FTT boundary was defined by both words and map. Arrangements for on-the-spot investigation and prompt demarcation prior to establishment were presented in its provisions.

The major difference encountered in demarcation problems was that of interpretation and transposition of the boundary lines onto a

large scale map, and application to the ground. In the case of the Morgan Line this was accomplished from map alone in the absence of specific demarcation instructions. The Italo-FTT boundary was interpreted and transposed by both word and map, plus exacting demarcation criteria.

The similarities of the boundaries also fall into three principal categories: (1) their areal relationships within the Venezia region, (2) the procedures followed in demarcation, and (3) the geographical phenomena and problems encountered in their demarcation.

Even though their lengths differed considerably, the areas effected by the boundary lines were contiguous. Regional aspects such as history, geography, economy and ethnography, as a result, were very similar.

In each instance actual demarcation procedures followed a similar pattern. Map and/or word to ground relationships, thorough geographic investigation of basic land use patterns, and natural features were of primary concern in marking the boundary lines upon the ground. Most of the local problems were connected with the operation of subsistence farms and fishing rights. The ethnic problem was minimized by the sparse population and predominance of Slovenes. Several important routes of communication and local water and/or power resources were affected by the boundaries.

The delimitation descriptions in both cases provided the demarcators with a number of questionable implications, especially in connection with intent, vague definition, and disposition of bodies of water and rivers. Neither boundary definition was fully explicit, though in

the case of the Morgan Line precise description may have been purposely or perhaps inadvertently omitted.

The importance of maps was revealed in each demarcation. In one instance this was brought out due to boundary lines upon maps of different origin, and in the other due to the age of the map edition. Maps of a larger scale than those used in the agreements and treaty were required for demarcation work in the field. Maps were an indispensable item of equipment, but the ground demarcation of both boundaries was entirely dependent upon the actual geography of the area rather than maps.

The harmonious relationships which developed between joint demarcation teams were of tremendous advantage in solving minor problems. Escorts for protection of demarcation teams were not required in either case.

Even though these boundary problems have presented a number of similarities, each exemplified its own individuality. Political, historical, economic, ethnic, military and geographical implications figure prominently in the claims and suggestions for a justifiable boundary delimitation in both cases.

A Summary Evaluation

The many topics discussed in the foregoing pages can readily be placed into ten main categories for constructive assessment. The following conclusions supported by the field work and library research of this study also substantiate opinions expressed in the books: "Boundary-Making," by Stephen B. Jones; "International Boundaries," by S. Whittmore Boggs; and "The Italo-Yugoslav Boundary," by A. E. Moodie.[1]

These are: (1) the importance of Venezia Giulia as an area for study of past, current and future problems in boundary geography, (2) the overriding significance of general political situations surrounding boundary affairs, (3) the importance of harmonious relationship between demarcation teams, (4) the importance of following the steps of territorial allocation, delimitation, demarcation and administration in boundary development, (5) the seriousness of slight or unintentional ambiguities in terminology governing delimitation, which cause difficulty in demarcation, (6) the adverse effects that the lack of precise demarcation criteria may have upon a boundary already established and functioning in an administrative capacity, (7) the importance of prompt and speedy ground demarcation once a boundary has been delimited, (8) the limitations of maps as an authoritive instrument for delimitation and/or demarcation due to inaccuracies, lack of detail, or the difficulty of transposing a line from a small scale map to a large scale map or the ground, (9) the importance of the delimitator being familiar with the geography of the area being delimited, and the problems which confront the demarcator as a result of vague definition; and conversely, the importance of the demarcator being familiar with the problems involved in delimitation, and (10) an awareness of the importance of firsthand geographic knowledge in boundary-making, and the significant contributions regional geographers can make towards solving boundary problems.

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[1] For those who have a further interest in the subject, the writer would like to highly recommend these three excellent works. All three authors are geographers, prominent in their field. "Boundary-Making," by Jones is a handbook for statesmen, treaty editors and boundary commissioners. "International Boundaries," by Boggs is a study of boundary functions and problems. "The Italo-Yugoslav Boundary," by Moodie is a study in political geography including geographical and historical accounts of the many boundary disputes in the Julian March.

APPENDIX A

ORIGIN OF THE MORGAN LINE[1]

In August 1944 Marshal Tito of Yugoslavia met with the Supreme Allied Forces military commander in Italy to discuss the operational necessity for Anglo-American use of the port of Trieste and lines of communication through Venezia Giulia north to Austria during the final assault on the fortress of Europe. At the close of World War II Allied officials also envisaged Anglo-American Military Government control of the whole of Venezia Giulia to the 1939 Italian-Yugoslav border pending final settlement of the Italian Peace Treaty.

Tito expressed no objection to the former proposal but was hesitant and non-commital on the latter. The problem which was not resolved in the August meeting with Tito was again restudied in November of 1944 by Allied authorities and it was evident that it involved both military and political issues.

It was apparent in February, 1945, that an agreement insofar as the military situation was concerned was essential due to pending operational plans. At a meeting in late February, 1945, in Belgrade between Tito and the Supreme Allied commander, it was clear that Tito had political desires to lay full claim to as much of Venezia as possible. He recognized the military issue at stake which was vital for the final offense in northern Italy but was not in accord with the political issue involving Anglo-American Military Government control of Venezia Giulia

in the post war era. The complexity of the political factors was recognized by all parties concerned.

Ensuing events went against Anglo-American wishes. Tito's forces seized and occupied all of Venezia Giulia including Trieste, Gorizia and areas west of the Isonzo River in late April and early May 1945, prior to the arrival of Anglo-American forces. Diplomatic efforts by the Anglo-American governments failed to resolve the political issue in their favor.

An effort by Lt. General W. D. Morgan, Chief of Staff, AFHQ, at a 7-9 May meeting with Tito in Belgrade failed to bring forth even an acceptable agreement on the military issues. Meanwhile, Anglo-American troops and Yugoslav troops had made contact in Trieste and along the western Venezia Giulia boundary. The atmosphere was one of hostility. The entire situation was completely in the hands of governmental officials. Not wishing to risk war with Yugoslavia for post war control of Venezia Giulia by forceably ejecting the Yugoslav forces from Italian soil, the Anglo-American governments decided that a purely military boundary dividing occupational forces in Venezia Giulia was the only practical solution.

After lengthy diplomatic negotiations the agreement for the Provisional Administration of Venezia Giulia was signed between the Anglo-American and Yugoslav governments in Belgrade on June 9, 1945, (Appendix C). The agreement included the proposed delimitation boundary (Morgan Line) which was later to be amplified in detail at the Duino meeting June 13-20, 1945, (Appendix D) between Chiefs of Staff, Generals Jovanovic of Yugoslavia and Morgan of the Anglo-American forces.

The Morgan Line as it was called continued in effect between Anglo-American and Yugoslav military forces and governments during final Italian Peace Treaty negotiations until it was dissolved on September 15, 1947, upon ratification of the Italian Peace Treaty.

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[1] Robert W. Kromer, Civil Affairs and Military Government in the Mediterranean Theater, Washington, D.C.: Office Chief Military History, File No. 2-3.7, AX, C2, Chapter XV, "The Occupation of Venezia Giulia," no date, pp. 1-50.

APPENDIX B

ORIGIN OF THE ITALO-FTT BOUNDARY[1]

The provisional boundary between Italy and the Free Territory of Trieste was conceived at the United Nation's peace table following World War II. Negotiations for the settlement of the disputed territory got underway at the London Conference in September 1945 when the Council of Foreign Ministers announced action had been taken for further examination of the terms of the Italian Peace Treaty. The Council directed its deputies to report on a line between Italy and Yugoslavia which would in the main be ethnic; to carry out appropriate ground investigations before final delimitation; and to report on a proposed international control which would assure that the port and transit facilities of Trieste would be available for use on equal terms as is customary in other free ports of the world.

A delegated commission of experts arrived in Venezia Giulia in early March 1946 and remained 27 days. The commission was composed of representatives from the U.S., U.K., U.S.S.R. and France. Their task was to carry out an on the spot investigation and to determine all pertinent ethnic and economic aspects of the area and to report on the results. Each of the four powers recommended different delimiting lines. The French, U.S. and U.K. lines although similar in the north diverged considerably in Istria. The U.S.S.R. line was located west of

the others and gave Trieste and Monfalcone to Yugoslavia. The other three lines annexed Trieste and Monfalcone to Italy.

A compromise in June 1946 accepted the French line as the boundary between Italy and Yugoslavia and recommended establishment of the Free Territory of Trieste. Final agreements were made in November at New York over the protests of both Italian and Yugoslav governments. On February 10th, 1947, the Italian Peace Treaty was signed in Paris by involved nations and awaited ratification to make it official. The latter occurred September 15th, 1947.

The boundary between Italy and the Free Territory ceased to exist seven years later, October 1954, when the Free Territory was dissolved by mutual consent of the Italian and Yugoslav governments together with U.N. approval.

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[1] Italian Affairs - Documents and Notes, Rome: Documentary Centre, Vol. II, No. 6, November 1953, pp. 89-105.

APPENDIX C

BELGRADE AGREEMENT[1]

PROVISIONAL ADMINISTRATION OF VENEZIA GIULIA

1. The portion of the territory of Venezia Giulia west of the line on the attached map which includes Trieste, the railways and roads from there to Austria via Gorizia, Caporetto, and Tarvisio, as well as Pola and anchorages on the west coast of Istria will be under the Command and control of the Supreme Allied Commander.

2. All Naval, Military and air forces west of the line on the attached map will be placed under his command from the moment at which this agreement comes into force. Yugoslav forces in the area must be limited to a detachment of regular troops not exceeding 2000 of all ranks. These troops will be maintained by the Supreme Allied Commander's administrative services. They will occupy a district selected by the Supreme Allied Commander west of the dividing line and will not be allowed access to the rest of the area.

3. Using an Allied Military Government, the Supreme Allied Commander will govern the areas west of the line on the attached map, Pola and such other areas on the west coast of Istria as he may deem necessary. A small Yugoslav Mission may be attached to the Headquarters of the Eighth Army as observers. Use will be made of any Yugoslav civil administration which is already set up and which in the view of the Supreme Allied Commander is working satisfactorily. The Allied Military Government will, however, be empowered to use whatever civil authorities they deem best in any particular place and to change administrative personnel at their discretion.

4. Marshal Tito will withdraw the Yugoslav regular forces now in the portion of Venezia Giulia west of the line on the attached map as well as those in the town and vicinity of Pola by 08 hours GMT, June 12th 1945. Arrangements for the retention of the Yugoslav detachment referred to in paragraph 2 will be worked out between the Supreme Allied Commander and the Yugoslav High Command.

5. Any irregular forces in this area will, according to the decision of the Supreme Allied Commander in each case, either hand in their arms to the Allied Military authorities and disband, or withdraw from the area.

6. The Yugoslav Government will return residents of the area whom they have arrested or deported with the exception of persons who possessed Yugoslav nationality in 1939, and make restitution of property they have confiscated or removed.

7. This agreement in no way prejudices or affects the ultimate disposal of the parts of Venezia Giulia west of the line. Similarly the military occupation and administration by Yugoslavia of the parts of

Venezia Giulia east of the line in no way prejudices or affects the ultimate disposal of that area.

Signed at Belgrade, June 9, 1945.

Dr Ivan Subasic Minister of Foreign Affairs	R. C. Skrine Stevenson. H. B. M. Ambassador	Richard C Patterson Jr. U. S. Ambassador

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[1] U.S., Statutes at Large, LIX, Part 2, p. 1855, and U.S. Department of State EAS 501, Provisional Administration of Venezia Giulia, (Washington: U.S. Government Printing Office, Publication 2562, 1946).

APPENDIX D

DUINO AGREEMENT[1]

AGREEMENT BETWEEN THE SUPREME ALLIED COMMANDER
MEDITERRANEAN THEATER OF OPERATIONS
AND
THE SUPREME COMMANDER OF THE JUGOSLAV ARMY

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1. The purpose of this agreement is to determine certain detailed matters arising out of the agreement signed by the Jugoslav Foreign Minister and the United States and British Ambassadors, in BELGRADE on 9 June 1945.

2. The term VENEZIA GIULIA will be considered throughout this agreement to mean the 1939 Italian provinces of GORIZIA, TRIESTE, FIUME (CARNARO) and POLA (ISTRIA).

3. The areas of the territory of VENEZIA GIULIA which will be under the command and control of the Supreme Allied Commander and the Jugoslav High Command respectively will conform to the boundaries now marked accurately on the maps at Appendices A and B.

4. The Jugoslav detachment, remaining in the area under the command and control of the Supreme Allied Commander, will initially concentrate in accordance with the instructions attached at Appendix C.

5. For liaison duty in connection with Jugoslav troops a Jugoslav mission will be attached to Headquarters, Eighth Army, or to the most appropriate Allied Headquarters. The detailed composition and functions of this mission will be as set out at Appendix D.

6. The Jugoslav authorities will facilitate the occupation of the area around POLA by troops of the Supreme Allied Commander in accordance with details set out at Appendix E.

7. Jugoslav rights regarding war booty will be as set out at Appendix F.

8. Arrangements in respect of command and control of anchorages on the west coast of ISTRIA will be as set out at Appendix G.

9. Control of movement in VENEZIA GIULIA will be in accordance with Appendix H.

10. Arrangements will be made for the control of railway traffic between the Allied and Jugoslav-occupied zones of VENEZIA GIULIA and for the settlement of matters affecting trade and commerce between those zones in accordance with Appendix I.

11. The Jugoslavs will have the right to use the ports of TRIESTE and POLA in accordance with Appendix J.

12. This agreement enters into force on being signed. Like that signed at BELGRADE on 9 June 1945, it in no way prejudices or affects the ultimate disposal of any part of VENEZIA GIULIA. The agreement is prepared in the English and Serbo-Croat languages. In the event of any dispute as to its interpretation, the English text will be regarded as authentic.

(Sgd) A. Jovanovic

. . . . . .

For Marshal Josip Broz TITO
Supreme Commander of the Jugoslav Army

(Sgd) W. D. Morgan

. . . . . .

For Field Marshal The Honourable Sir Harold R.L.G. ALEXANDER,
Supreme Allied Commander of the Mediterranean Theatre of Operations

Signed at DUINO

20th June 1945

hours

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[1] Allied Forces Headquarters, Supreme Allied Commander's Secretariat Letter 20 June 1945, Agreement with Yugoslavs, Office of TAG, DA, Washington, D. C., p. 10.

APPENDIX E

TREATY OF PEACE WITH ITALY 1947[1]

PART I

TERRITORIAL CLAUSES

SECTION I - FRONTIERS

Article 1

The frontiers of Italy shall, subject to the modifications set out in Articles 2, 3, 4, 11 and 22, be those which existed on January 1, 1938. These frontiers are traced on the maps attached to the present Treaty (Annex I). In case of a discrepancy between the textual description of the frontiers and the maps, the text shall be deemed to be authentic.

. . . . . .

Article 4

The frontier between Italy and the Free Territory of Trieste shall be fixed as follows:

(i) The line starts from a point on the administrative boundary between the provinces of Gorizia and Trieste approximately 2 kilometers northeast of the village of San Giovanni and approximately 0.5 kilometers northwest of point 208, forming the junction of the frontiers of Yugoslavia, Italy and the Free Territory of Trieste, and runs southwestward to a point adjacent to Highway No. 14 and approximately 1 kilometer northwest of the junction between Highways Nos. 55 and 14, respectively running from Gorizia and Monfalcone to Trieste;

(ii) The line then extends in a southerly direction to a point, in the Gulf of Panzano, equidistant from Punta Sdobba at the mouth of the Isonzo (Soca) river and Castello Vecchio at Duino, about 3.3 kilometers south from the point where it departs from the coastline approximately 2 kilometers northwest of the town of Duino;

(iii) The line then reaches the high seas by following a line placed equidistant from the coastlines of Italy and the Free Territory of Trieste.

The map to which this description refers forms part of Annex I.

Article 5

1. The exact line of the new frontiers laid down in Articles 2, 3, 4 and 22 of the present Treaty shall be determined on the spot by

Boundary Commissions composed of the representatives of the two Governments concerned.

2. The Commissions shall begin their work immediately on the coming into force of the present Treaty, and shall complete it as soon as possible and in any case within a period of six months.

3. Any questions which the Commissions are unable to agree upon will be referred to the Ambassadors in Rome of the Soviet Union, of the United Kingdom, of the United States of America, and of France, acting as provided in Article 86, for final settlement by such methods as they may determine, including, where necessary, the appointment of an impartial third Commissioner.

4. The expenses of the Boundary Commissions will be borne in equal parts by the two Governments concerned.

5. For the purpose of determining on the spot the exact frontier laid down in Articles 3, 4 and 22, the Commissioners shall be allowed to depart by 0.5 kilometers from the line laid down in the present Treaty in order to adjust the frontier to local geographical and economic conditions, provided that no village or town of more than 500 inhabitants, no important railroads or highways, and no major power or water supplies are placed under a sovereignty other than that resulting from the delimitations laid down in the present Treaty.

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[1] United Nations, U.N. Treaty of Peace with Italy, (Paris, France 1947), printed in the U.S., pp 2, 4, 5 (English language section).

APPENDIX F

DEMARCATION FORM - ITALY AND FTT 1947[1]

Record of location of provisional boundary marker No._____	Verbale di posa del termine provvisorio No._____
TO DAY, the_____in the presence of_____	OGGI_____ presenti:_____
for the Free Territory of Trieste Delegation and_____	per la Delegazione del Territorio Libero di Trieste ed_____
for the Italian Delegation, there has been established provisional boundary marker No._____	per la Delegazione Italiana, e stato collocato il termine provvisorio No._____
Said boundary marker is located at co-ordinates_____	Detto termine e situato nel punto
on the 1:25.000_____map sheet	della tavoletta 1:25.000_____
Brief description of boundary marker_____	Descrizione del termine_____
Reference points_____	Punti di riferimento_____
Location of signal_____	Ubicazione del segnale_____
Brief trace of the line between this boundary marker and the preceding one_____	Andamento sommario della linea tra il termine collocato e quello precedente_____
To this record_____ sketch annexed.	A questo verbale_____annesso uno schizzo.

S I G N E D

F I R M A T O

CHIEF OF THE FREE TERRITORY OF TRIESTE SUBDELEGATION IL CAPO DELLA SOTTODELEGAZIONE DEL TERRITORIO LIBERO DI TRIESTE	IL CAPO DELLA SOTTODELEGAZIONE ITALIANA CHIEF OF THE ITALIAN SUBDELEGATION

TOPOGRAPHER OF THE FREE TERRITORY OF TRIESTE SUBDELEGATION IL TOPOGRAFO DELLA SOTTODELEGAZIONE DEL TERRITORIO LIBERO DI TRIESTE	IL TOPOGRAFO DELLA SOTTODELEGAZIONE ITALIANA TOPOGRAPHER OF THE ITALIAN SUBDELEGATION

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[1] Blank demarcation survey form utilized in the field July and August 1947 (personal copy).

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Explanatory Notes

It is important to stress that the study on the Morgan Line conditions could be made only on the basis of accessible data and personal knowledge. The only data that has been taken into account is that which has been made public and it offers a somewhat uncertain standard. It has been extremely difficult to reconstruct the composition of the entire situation since little data of scientific value is available for making a most accurate estimate of developments surrounding the establishment of the operational functioning of the Morgan Line.

The originals of the text and precise delimitation of the Morgan Line boundary between occupational zones known as the Duino Agreement (military conference between Generals Morgan (British) and Jovanovic (Yugoslav) at Duino, Italy, June 13-20, 1945, to amplify the June 9, 1945, Belgrade Agreement between the United States, British and Yugoslav governments) have not been made available to the public by the State Department but unclassified copies have been obtained from The Adjutant General's Office, Department of Army, Washington, D.C.

A cursory search of pertinent records by the Departmental Records Branch of The Adjutant General, Department of Army, Washington, D.C., indicated that there is a large volume of material concerning the Morgan Line in their custody. However, these records are predominantly classified and not available for unofficial research.

Unclassified American unit histories, including grid locations of control posts in the American sector of the Morgan Line, are available for unofficial research at the Department of Army, Office of The Adjutant General, Kansas City Records Center, 601 Hardesty Avenue, Kansas City, Missouri, providing application for permission to examine records is approved.

Two-thousand-seven-hundred feet of 16mm film was made of the terrain along the Morgan Line in 1946. However, a completed picture as such was never produced. The unedited footage is available for purchase at ten cents a foot from the Commanding Officer, Signal Corps Pictorial Center, 3511 Thirty-Fifth Avenue, Long Island, New York.

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