

## APPENDIX

TABLE OF DISTANCES

NAME	Miles from Canal Flat	Character of Rapids
Athalmer.....	34	
Golden.....	124	
Redgrave Cañon—Maelstrom.....	148	Great
Kitchen Rapids.....	151	Medium
Beavermouth.....	155	
Surprise Rapids.....	178	Great
Kinbasket Rapids—foot Kinbasket Lake.....	203	
1st section.....	203	Minor
2nd section.....	204	Great
3rd section.....	205	"
4th section.....	206	"
5th section.....	207	"
6th section.....	208	"
7th section.....	210	"
Cummins Creek.....	212	Medium
Yellow Creek.....	219	Great
10th section.....	221	"
11th section.....	223	Medium
12th section.....	224	"
13th section.....	225	"
14th section.....	226	"
15th section.....	227	Minor
Ferry.....	228	
Canoe River.....	232	
Potlatch Rapids.....	244	Minor
Gordon Rapids.....	265.5	Medium
Soda Creek Rapids.....	269.5	"
12 Mile Rapids.....	288	Minor
Death Rapids.....	289	Great
Priest Rapids, B. C.....	289.5	"
18 Mile Rapids.....	300	Minor
Unnamed Rapids.....	323.5	Medium
Unnamed Rapids.....	325	"
Petite Dalles.....	326	"
Steamboat Rapids.....	328	Minor
Revelstoke.....	331	
Arrowhead.....	359.5	
Castlegar.....	480.5	
Big Tincup Rapids.....	481	Medium
Little Tincup Rapids.....	481.5	Minor
Kootenay River.....	482	
Kootenay Rapids.....	482.5	Minor
Upper Trail Rapids.....	501.5	"
Lower Trail Rapids.....	503	"
Rock Island Rapids, B. C.....	505	"
Salmon River Bar.....	508	"
Pend d' Oreille River.....	511.5	
International Boundary.....	512	

TABLE OF DISTANCES

NAME	Miles from Boundary	Charater of Rapids
Unnamed Rapids.....	2	Minor
Unnamed Rapids.....	4	"
Bishops Rapids.....	11.5	"
Little Dalles.....	16	Great
6 Mile Rapids.....	30	Minor
5 Mile Rapids.....	31	"
Kettle Falls.....	41	"
Grand Rapids.....	46	Great
Driftwood Island.....	53.5	"
Rock Bar.....	67.5	Minor
Turtle Rock.....	77	"
Deception Rock.....	80	"
Rogers Bar.....	86.5	"
Black Rapids.....	91	"
Unnamed Rapids.....	96	"
Spokane Rapids.....	106	Great
Spokane River.....	107	"
Middle Rapids.....	109	Minor
Hawk Creek.....	111.5	"
French Rapids.....	114	Minor
Hell Gate.....	126.5	Great
Brickleys Rapids.....	156.5	Medium
Equilibrium Rapids.....	159	"
Mahkin Rapids.....	170	Great
Unnamed Rapids.....	171.5	Minor
Parsons Rapids.....	174	"
Unnamed Rapids.....	175	"
Unnamed Rapids.....	176	"
Long, or Whitecap Rapids.....	180.5	Great
Box Cañon.....	181.5	"
Eagle Rapids.....	184.5	Minor
Unnamed Rapids.....	186	"
Unnamed Rapids.....	188	"
Unnamed Rapids.....	191	"
Foster Creek Rapids.....	193	Great
Okanagan River.....	203	"
Methow Rapids.....	212.5	Minor
Chelan River.....	229	"
Downing Rapids.....	230.5	Minor
Unnamed Rapids.....	234.5	"
Unnamed Rapids.....	236.5	"
Entiat Rapids.....	254	"
Wenatchee River.....	268	"
Wenatchee Rapids.....	268.5	Minor
Unnamed Rapids.....	269.5	"
Wenatchee.....	271	"
Rocky Island Rapids.....	275.5	Minor
Rock Island Rapids, U. S. A.....	283	Great

TABLE OF DISTANCES

NAME	Miles from Boundary	Character of Rapids
Unnamed Rapids	285.5	Minor
Cabinet Rapids	288.5	Great
Gualquil Rapids	305	Minor
Island Rapids	315	"
Priest Rapids, U. S. A.		
1st section	331	Minor
2nd section	332	Great
3rd section	335	Medium
4th section	336	"
5th section	340	"
6th section	341	Great
7th section	342.5	Minor
Coyote Rapids	356	"
Yukima River	407	
Pasco	413	
Snake River	416	
Walla Walla River	427	
Bull Run Rapids	432	Minor
Umatilla Rapids		
1st section	446.5	Medium
2nd section	447.2	Minor
3rd section	448	"
Umatilla	450	
Devil's Run Rapids	453	Minor
Canoe Encampment Rapids	473	"
Owyhee Rapids	498	"
Blalock Rapids	503.5	"
Four o'clock Rapids	506	"
Rock Creek Rapids	510.5	"
Squally Hook Rapids	515.5	"
Indian Rapids	518	"
John Day Rapids		
1st section	520.2	"
2nd section	521.2	"
3rd section	522	"
Schofield Rapids	524	"
Hell's Gate	529	"
Deschutes River	530	
Celilo Falls	536	
The Dalles City	548	
Hood River	569	
Upper Cascades	587	Great
Middle Cascades	590	Minor
Lower Cascades	592	"
Vancouver	638	
Willamette River	643	
Astoria	742	
Mouth of Columbia River	752	

## TABLE OF DISTANCES

The foregoing table of distances makes the length of the Columbia River to be 1,264 miles, of which 512 miles are in British Columbia and 752 miles are in the United States. The mileage from Castlegar, B. C., to the Pacific Ocean was mainly compiled from the reports of Lieutenant T. W. Symonds, the United States engineer, and J. P. Forde, the Canadian engineer. I found their distances, while not always exact, to be near enough for all practical purposes. The mileage between Canal Flat and Castlegar was obtained from various sources. There is much uncertainty about the actual distance around the Big Bend, B. C. Two distances were furnished me, 153 miles and 200 miles. The former, I believe, is based upon a railroad survey which is shorter than the River; while the latter is the estimate of the fire-wardens and trappers who travel the section frequently. I have used an intermediate distance of 176 miles, obtained partly by scaling maps, and partly as the result of my own experience. There has never been an exact determination of the length of the River in British Columbia; and in the United States the length I used is disputed by the state engineer of Washington, who claims that 756 miles instead of 752 is correct. I have no doubt but that he is right, but as there was no way of apportioning the four extra miles between the various places and rapids I did not apply the increase. I believe that if an exact survey would be made following all the meanderings of the main channel of the Columbia, its length would be found to be something in excess of the 1,264 miles I have computed.

It will be noted that in the table the rapids are divided into three classes. The Great Rapids are those that are very violent, and, except in some instances where their peculiar construction makes possible the avoidance of their more dangerous features, are generally unsafe to run, in which case they must be negotiated either by lining or portaging. The Medium Rapids are less violent than the great ones and can be safely run by exercising caution and skill. The Minor Rapids are either mere riffles or have no dangerous features.

It will also be noted that some of the minor rapids are unnamed. Many of these doubtless have local names, but if so, I was unable to ascertain them.

## NEWSPAPER WRITEUPS

The navigation of the Columbia River by a lone man in a rowboat aroused much interest, and as the different towns on the River were reached the trip was featured in the local newspapers. Interior towns copied the writeups—some even as far east as the middle west. The metropolitan cities of the Pacific Coast, Los Angeles, San Francisco, Portland, and Seattle gave the trip some space. Below are given four entirely unsolicited newspaper articles. The others are too numerous to print, but they are practically the same in substance as those given.

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GOLDEN STAR, June 21, 1921—

(Special to The Golden Star.)

INVERMERE, B. C., June 21.—Last week there arrived here on his way around the Big Bend of the Columbia river, M. J. Lorraine, a locating engineer, who had come all the way from Alhambra, California, for the sole purpose of the hazardous trip of the Columbia river from its source in the Windermere district, to its mouth at Astoria, Oregon, a distance of some fourteen hundred miles all told. He will make the trip alone in his seventeen-foot dory. This he built at Canal Flat, the very head of the Columbia river, and out of a log of wood carved himself out his oars. The boat has an extreme length of seventeen feet with a keel width of some thirty-six inches and flares up to a width of about four feet at the wide part on the gunwales. It has a carrying capacity of about one ton weight and when loaded will draw at its deepest seven inches of water. She bears the name "Columbia."

The first leg of the journey was from Canal Flats across the lakes to this part where a stop of several days was made to lay in supplies. From Athalmer the official start was made on Sunday morning and will be continued leisurely until Golden, some one hundred miles distant, is reached. It is after passing Golden that the perils of the trip come in, for there is a succession of wild and dangerous rapids of varying lengths the way through until long after the Big Bend is passed and the river winds on south to Revelstoke.

Mr. Lorraine intends taking the trip leisurely and has allowed himself six months to cover the fourteen hundred miles. He will



prospect for minerals along the way. He is an experienced voyager, having run the swift waters of Alaska rivers in small crafts.

PASADENA POST, Nov. 29, 1921—

Bearing the distinction of being the first and only man to travel the entire length of the Columbia river in a boat, M. J. Lorraine arrived in Alhambra a few days ago, looking in the best of rugged health, despite his 68 years and his long, perilous trip. Mr. Lorraine is the guest of his son, City Manager Grant M. Lorraine, and expects to make his permanent residence here.

Mr. Lorraine has already started the arrangement of data concerning his experience, which will be compiled in book form, making use of many interesting photographs which he took during the voyage down the river from its source to its mouth, from an engineer's point of view. He has much valuable information relating to the character of the country through which he passed, and its agricultural, horticultural and mineral resources.

Mr. Lorraine, who is a member of the American Society of Civil Engineers, and well known on the coast in engineering circles, is the first man to cover the entire distance of the river, and there have been few who have traveled even a part of the course. The start was made at Canal Flat, B. C., on June 13, ninety miles north of the international boundary. He reached the mouth of the river at Astoria, Ore., on November 9. A total of 107 rapids were shot, 35 in Canada and 72 in the United States. His boat, the "Columbia," was built by himself and designed especially for shooting rapids. It is a dory type, 17 feet long, and with a 4½-foot beam. Upon his arrival at Astoria the boat was purchased by the city and is to be placed in the city park as a permanent memento of the journey.

Approximately 1,400 miles were covered by Mr. Lorraine on the trip, and he suffered no mishap nor accident of any kind, a fact which is considered remarkable, as the river in many places is extremely dangerous and scores of people have lost their lives in its treacherous rapids.

CALGARY HERALD, Dec. 27, 1921—

(Special to The Herald.)

INVERMERE, B. C., Dec. 24.—With the Windermere district as a centre, many books have been published in the last two years. Now a new source for narrative writing seems to have unfolded itself, and there has just appeared a finely illustrated volume,

"Down the Columbia," by Lewis R. Freeman. Mr. Freeman gives an account of his experience with a moving picture man on a trip down the Columbia River. His trip nominally commences at Canal Flat and passes by easy stages through to Portland, Oregon. In reality much of the traveling was done overland and only the worst rapids and cataracts visited and gone through in the small skiff which carried the party and the camp equipment.

There is about to appear on the subject of this same country, that traversed by the Columbia river, a book by a really hardened voyageur. This time it will be from the pen, not so much of a polished writer, but one who knows the game of travel in the rough waters of the rivers of North America, learned from actual experience and in the most cases the trips were run by him with his lone hand to protect and guide him. The new work will be from the hands of Mr. M. J. Lorraine. Mr. Lorraine is a member of the American Society of Civil Engineers. He is a man who has roughed it a great deal and since the early eighties has spent his life in Western America largely engaged in the construction of trans-continental railways. As a hobby he has spent much of his holidaying in traveling rivers from their source to the sea, having had experience in some of the rough waters of the Unuk, for instance. Mr. Lorraine resides at Alhambra, near Pasadena, California. Mr. Freeman made the trip in the year 1920, while Mr. Lorraine's was in 1921.

With Mr. Lorraine, however, there have been no frills. He came quietly up by himself to Canal Flat, there built himself a small boat of the dory type from lumber which he purchased at Wardner. She is a craft 17 feet long and 4½-foot beam. With this and by himself, a man over sixty years of age, he started out. He had his own little camping outfit with him and relied partly on his gun and partly on what he took along with him for his daily sustenance. He left Canal Flat on the thirteenth of June, passed here a day or two after and, taking a short rest, entered the Columbia river at Athalmer and was off on his perilous, lonely journey. He reached the mouth of the Columbia river on the 9th of November of this year after a venturesome journey in his small skiff of some 1,400 odd miles. This is the first authentic journey that has ever been made, according to the annals of man, by any person in one continuous journey from the source of the Columbia river to its mouth. Many a traveler has gone over parts of it and David Thompson in the year 1810 made the entire distance from the source to the mouth, only part of it he made by first going down stream and the balance by going up stream. To Mr. Lorraine is



certainly due the credit of making the first continuous journey, and this by himself, over the whole surface of the Columbia river. To give some idea of what this means, it is only necessary to say that in it he shot 107 rapids, 35 in Canada and 72 in the United States. Many of these are known to travelers as being the most dangerous in river navigation on the continent of America. In these may be cited our own Surprise Rapids, the Death Rapids north of Revelstoke, and others less famous.

Upon reaching his destination the small craft in which Mr. Lorraine made his journey was purchased from him by the city of Astoria, Oregon, and now rests in the city park as a permanent remembrance of the journey.

The book which he is now writing will be fully illustrated and the narrative will be the result of daily writings made on his passage to the sea. It will be named "The Columbia Unveiled."

ASTORIA BUDGET, November 17, 1921—

#### FAMOUS SKIFF MAY GRACE CITY PARK

According to an announcement by Secretary William Gratke, of the Chamber of Commerce, yesterday, M. J. Lorraine, the man who made the first trip from the source of the Columbia to its mouth and who landed in Astoria recently after the hazardous trip of 1,400 miles, wants to dispose of the 17-foot craft in which he made his journey.

Mr. Gratke says that several prominent local citizens are considering purchasing the boat and having it placed in the city park as the first boat to make the trip down the entire length of the great river.