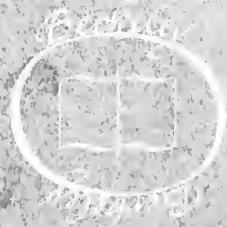
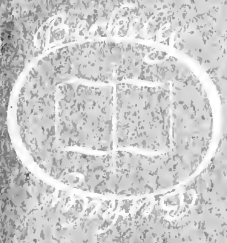


Buckley





# NORTHERN MINNESOTA BOUNDARY SURVEYS IN 1822 TO 1826, UNDER THE TREATY OF GHENT.\*

BY HON. WILLIAM E. CULKIN.

At the close of the War of 1812, the treaty of Ghent, signed December 24, 1814, at the Netherland city of that name, settled the terms of peace, but said nothing about the real controversy which precipitated the struggle. The war had been brought about by the conduct of the British in holding up American ships on the high seas and taking from them men whom they claimed as owing service to Great Britain. The war being ended, Britain was ready to give up the practice of search of American ships and seizure of American men, but she was by far too proud to say so. The practice would be abandoned, but Britain would give no promise on compulsion exerted by the colonists, who themselves, in British eyes, were disloyal servants of the crown. The British retained the rights to pretend that the concession of freedom of the sea to the new republic was due to the forbearance and toleration of the mother country, not to valor of the Americans on land and sea.

But there were minor matters of controversy between the countries, and, as a treaty of peace had to be made, it was advisable to adjust these quarrels. One dispute related to the boundary between the American possessions and the remaining British areas on the north. The boundary had been set forth in the treaty of Paris in 1783, but had never been marked on the ground, and the language of the treaty in some instances was indefinite and difficult to determine its intent.

The treaty of Ghent provided for the settlement of the boundary by arbitration. In this discussion we have to do only with the seventh article, which deals with the boundary from the Straits of Mackinaw to the Lake of the Woods and therefore is relevant to Minnesota history. It provided that

\*Read at the monthly meeting of the Executive Council, September 8, 1913; previously published in the Duluth News Tribune, July 27, 1913.

the two commissioners, one from each side, who were to be appointed to settle the boundary from Lake Erie to the Straits of Mackinaw under other provisions of the treaty, after having finished that work, were

“authorized upon their oaths impartially to fix and determine, according to the true intent of the said treaty of peace of 1783, that part of the boundary between the dominions of the two powers which extends from the water communication between Lake Huron and Lake Superior to the most northwestern point of the Lake of the Woods; to decide to which of the two parties the several islands lying in the lakes, water communications and rivers forming the said boundary do respectively belong, in conformity with the true intent of the said treaty of peace of 1783; and to cause such parts of the said boundary as require it to be surveyed and marked.”

We thus see the magnates of the two powers sitting in council among the spires and palaces of ancient Ghent dealing with the boundary of the far-off wilderness, now the home of many.

The American commissioner was Peter B. Porter of Niagara county, New York, himself a borderman, with a just sense of his personal dignity, the importance of his commission, and the future of the country. The British representative on the Lake Superior line was Anthony Barclay of Nova Scotia, who had succeeded John Ogilvy, who had died of fever contracted on the St. Clair flats while working in the open air in the line of duty. Everything indicates that Mr. Barclay, like his co-commissioner, was an extremist on his side. The two commissioners met at Utica, N. Y., on June 18, 1822, and issued orders for a survey of the line between the Sault Ste. Marie and the Lake of the Woods. They did not accompany the surveyors and agents who went into the field.

During the summers of 1822 and 1823 the surveyors went over the ground from the starting point to the Lake of the Woods. Evidently considering the Grand Portage line as the course of the boundary, they surveyed that line only. They reported to the commission at a meeting held at Albany, N. Y., in February, 1824. Everything indicated the acceptance of the Grand Portage route, the present boundary. But a meeting was held at Montreal in October, 1824, and here controversy arose. The British commissioner, Mr. Barclay, ordered

a survey of the route from Lake Superior to Rainy lake and the west by way of the St. Louis river, or, as it was sometimes called, the Fond du Lac river.

Mr. Porter demanded a survey of the route via the Kaministiquia river, which, lying northeast of Pigeon river, was more favorable to the United States.

Under these orders surveys were made, and thus the first survey of the Duluth harbor was made in 1825 by the international surveyors under the British claim that the true boundary was through the main channel of the St. Louis to the Embarrass river, up that stream to the head of canoe navigation, across a portage to the Lesser Vermilion, now the Pike river, down the Pike to Lake Vermilion, across that lake to the Greater Vermilion, and down that river and through the connecting waters to the Lake of the Woods.

The language of the treaty of 1783 describing the boundary through Lake Superior and on to the west is as follows:

“Through Lake Superior northward of the Isles Royale and Phelipeaux, to the Long lake; thence through the middle of the said Long lake and the water communication between it and the Lake of the Woods, to the said Lake of the Woods; thence through the said lake to the most northwestern point thereof.”

This language seems plain enough, but the fact is that when this survey was made no one could find Isle Phelipeaux, and no one could say what body of water it was that Benjamin Franklin and his associates in the treaty of 1783 meant by the words “the Long Lake.” There were long lakes in plenty, but which lake and how long? As to Isle Phelipeaux, that, alas, had entirely disappeared. No trace of it could be found. Neither Indian nor trapper could conjecture its whereabouts. Here controversy arose.

The commissioners, their agents, and the surveyors, probably knew from the beginning of the faulty Mitchell map used and followed by the negotiators of 1783; but if they did, they ignored or obscured the fact for diplomatic purposes. Isle Phelipeaux and Long lake were clearly delineated on that map. Long lake was merely a bay at the mouth of Pigeon river, and Isle Phelipeaux a clearly defined island on the map south of

Isle Royale, which, in fact, never existed. But as the line had to pass north of Isle Royale by that map and as it shows Isle Phelipeaux south of Isle Royale, using the Mitchell map, the reference to Isle Phelipeaux became wholly unimportant. But the commissioners did not have the Mitchell map, or they chose to ignore it, in the beginning. Reading the treaty of 1783 with the Mitchell map in hand made it clear where the boundary was to be. We know that toward the end the Mitchell map was before the commissioners.

There was one other circumstance tending to determine the actual course of the boundary, and around this the quarrel raged. The language of the treaty indicated that the line was to follow "the water communication between it [Lake Superior] and the Lake of the Woods." That, of course, could mean nothing else but that the old traveled water and canoe route was intended by these negotiators in 1783 to be the boundary.

Unfortunately, there were at least three water routes leading from Lake Superior to Rainy lake.

One of these, starting near where Fort William now is, followed in general the course of the Kaministiquia river and arrived at length at the Rainy lake, and thence continued down the Rainy river to the Lake of the Woods.

The second route was the old, well known Grand Portage route, which eventually became the boundary, following up the course of the Pigeon river to its source, crossing the height of land to those rivers and lakes which flow into the Rainy lake and river, and continuing thence to the northwest corner of the Lake of the Woods.

Finally, the third route passed through the Duluth harbor, up the St. Louis river, across the height of land into the Pike river, and thence across Vermilion lake to Rainy lake.

There was no dispute as to the boundary from the Lac la Pluie (Rainy lake) to the Lake of the Woods, and in the nature of things there could be none, as the Rainy river was the only possible route westerly in its neighborhood, whereas easterly from where the Rainy river flows from Rainy lake, Lake Superior might be reached at least in the three ways that have been



just described. Here was the crux of the problem, Which water route was the true line?

The American commissioner, Porter, coming from a militant border family of Americans residing near Niagara Falls, seeing that an agreement was not immediately available on the Grand Portage route, declared that he stood for the route by the Kaministiquia. Barclay, the British commissioner, a Canadian, then advanced the extreme claim that the true, ancient traveled route to the north was via the St. Louis river. Each could at least argue that the course claimed by him was a traveled route, although both had to admit that the Pigeon river route was, in recent days at least, of far greater importance than any other.

Let us state the arguments advanced by Mr. Barclay in support of his contention that the true boundary was through the line of the St. Louis river. He advanced five separate reasons. The first was that "the St. Louis river answered the description in the treaty, since after expanding into a lake (St. Louis bay) it discharged itself into the lake [Superior] not by a bay, as did Pigeon river, nor by a narrow stream, as the Kaministiquia, but by a narrow mouth made by two points." It is difficult to see very much in this argument or even to understand it, but Mr. Barclay insisted upon it.

His second reason was that the St. Louis river was an ancient commercial route to the north. This argument could not be denied, but at the same time this qualification was possessed by the Pigeon and the Kaministiquia river routes as well. He correctly argued also that the St. Louis route was more ancient than the Kaministiquia route, but here again the Pigeon river route might claim great antiquity.

The third reason the commissioner offered was that the St. Louis river route was the true one because it was the most easily navigable, being interrupted by the fewest portages. This claim could not be disputed.

Fourth, he argued that the old name of the St. Louis river was the Lake river, meaning the largest tributary of Lake Superior, and that the term "Long lake" was intended to mean Long Lake river or Big Lake river. As a matter of fact

the Ojibway name of the St. Louis river was and now is Big Lake river, Kitchigami-zibi, that is, Lake Superior river.

Fifth, he argued that the language of the treaty implied that the boundary west of Isle Royale should run to the south-west. This inference was insisted upon because the treaty said that the boundary was to run north of Isle Royale, and, said Mr. Barelay, if they intended the boundary to go to a point north of Isle Royale, it would have been easy to say that the boundary should go to that precise point without mentioning Isle Royale. But because the treaty said that the boundary should pass north of Isle Royale, it was argued by him that it was intended after having passed Isle Royale it should go south. It was unnecessary to say that it should go north of Isle Royale if the line had to pass thence north to go to the Kaministiquia or the Pigeon river.

The American commissioner took, of course, precisely opposite grounds, arguing that if the St. Louis river was meant it was ridiculous to go north of Isle Royale merely for the purpose of giving the United States an apparently worthless island. He said that while the St. Louis route was no doubt a commercial route, it was a very obscure one, and that it was the manifest intention of the treaty makers to follow routes which were known at the time when the treaty was made.

In any event, the persistent Barelay had forced a survey of the western end of Lake Superior, the Duluth harbor, the St. Louis river, the Embarrass river, Lake Vermilion, and the waters connecting it on its northern side with the present boundary waters.

It is likely that this survey, the first made of the route described, was the best and most accurate. It was made in the summer of 1825. The surveyors, fully equipped with every instrument known to their science, reached the harbor of Duluth in June. It must have been a considerable party with their assistants, canoe men, ax men, chain bearers, guides, and commissary. The maps which they made, showing their surveys, prove the high character of their work. These excellent surveyors did not appear to be much concerned in the controversy as to the boundary, as their work bears no evidence

whatever of partisanship. Their concern was merely to make a true survey. Barclay's object was to prove that there was a waterway for canoes via the St. Louis to the north.

It is true that this work done by these men was the first scientific survey made in the North Star State. St. Louis county may then claim the honor which arises from the fact that it was within her borders that the first scientific work was done in Minnesota.

The maps showing this survey bear the certificate of the two commissioners and of David Thompson, surveyor, to the effect that they are true maps of the survey made under the seventh article of the treaty of Ghent by order of the commissioners.

They show that at the exit from St. Paul bay to the lake the natural mouth of the river was in a very swampy condition, and this condition covered a large portion of Allouez bay. Almost facing the natural exit, on the opposite shore, is shown the mouth of Left Hand river. This is now known as the Nemadji river. About half way up the bay on the Superior shore is a notation showing the site of the old Northwest Fur Company's factory. There is a small square indicating the site of the building. This is about opposite Oatka beach. Here for a long time the Montreal fur traders had a post, probably dependent on the one at Fond du Lac.

The surveyors numbered the prominent points of land and islands as they appear in their plats from 1 to 53 in the distance from the entrance of the harbor to the place where the Embarrass river flows into the St. Louis. Thence they start again at one, and on reaching Vermilion lake they again fall back to one. These numbers on the plats refer to field notes which are in the archives at Washington and London, which give more specific information of the places referred to. Number 1 on the surveyor's plat is the extreme tip of Minnesota Point. Number 2 is a marshy islet not far from the mouth of the river, where the water flows into the lake from the bay. Numbers 3, 4, 5, 6, 7, and 8, are very small islets in the north part of the bay. All of these appear in the outside harbor not far from Rice's and Connor's Points. They have long

since disappeared, undermined by the floods whose force and direction were changed by the harbor improvements and the digging of the Duluth canal. The point of land in Superior known as Connor's Point is marked Bear's Passage in the survey. It is likely, however, that this name was intended not to be applied to the point, but to the strait between the inner and outer harbor now spanned by the Interstate bridge. The origin of the name can only be conjectured.

The bends in the river, with its numerous islands and bays, from the Interstate bridge to Fond du Lac are shown as in modern maps, although some details are lacking. More swamp is shown in the old survey than in recent ones. Nature was not at that time aided by the huge dredges which have dug hundreds of thousands of tons of rock and dirt from the bottom of the river. Above the upper harbor shown in the map there is a bay marked Pekagumew. On modern maps this appears as Pokegama bay.

Going up the river we come to the trading post marked "American Factory," showing four buildings on the site of the present village of Fond du Lac. The island in the river at that place is well shown. Passing a little above Fond du Lac, we reach the Grand Portage, 11,915 yards in length, a distance of nearly seven miles, over which the travelers were obliged to carry their boats and their goods. The river was not surveyed parallel to the portage trail, but its existence is indicated by dotted lines. At the western end of the long portage the survey of the river is resumed. A short distance from where the Grand Portage reaches the river, another portage is found of 2,029 yards, more than a mile. The canoeing is comparatively good from this place up the St. Louis river to the mouth of the Embarrass river, which on the old map is the "Riviere aux Embaras." The extraordinary convolutions of the St. Louis just west of Forbes station on the line of the Mesaba railroad are perfectly shown on the old map. At this place the river seemed to be undecided whether to go north or south, but it finally decided to cast its lot with Lake Superior. The height of land is reached in the vicinity of the villages of McKinley and Biwabik.

Near the headwaters of the Embarrass river there is a portage of 6,270 yards, about three miles and a half, across the height of land to the lesser Vermilion, now called the Pike river, and with a few portages the route enters Vermilion lake. The waters of the Pike river and of Vermilion lake flow toward the north and eventually reach Hudson bay. The survey of Vermilion lake was conscientiously and carefully made. Every island is delineated and numbered. The indentations of the shore are laid down with care and skill. The course of the old route is farther shown across the lake into the greater Vermilion river, which flows rapidly to the north. No survey since that time was made with greater care or more conscientious fidelity.

This body of men, perhaps fifty in number, including the various laborers, and the agents of the respective governments, with the secretaries, the chainmen, the cooks, and camp servants, must have startled the denizens of the wilderness, human and otherwise. It must have suggested to the Indians what was behind. Up to this time the natives had met the missionary and the trader, the first seeking his salvation and the second seeking his furs; but these two did not greatly interrupt the ordinary current of Indian life. There was a greater menace to the natives' mode of life in the clink of the surveyors' chain than in the exhortations of the missionary or the intrigues of the trader. By this time the redskin had, in a manner, adjusted himself to the views of the man of prayer and the man of trade; but how was he to square himself with this inexorable organization coming up behind?

This party, following this old trail through St. Louis county, startled the deer and the moose, the bear and the beaver, as never before. The waters of the bay and river before that time had been disturbed for a century and a half only by the casual and infrequent trader, and for a short distance by an expedition of American observers in the year 1820. But we may leave this subject as it is. Enough has been shown to justify the statement that northeastern Minnesota, now taking a prominent part and place in every field of modern development, first in many things and second but in few, is enti-

tled to the first place and first mention when the history of Minnesota is finally written. This is the old and not the new part of this state.

The commissioners at their meeting in 1827 had the whole matter on the table and sought to reach an agreement. At this time Mitchell's map was in the hands of Mr. Porter, and he offered to give up his claim to the route of the Kaministiquia river, provided the British commissioner would accept a line in the center of Pigeon river, known as Riviere aux Tourtes, and thence by the ordinary route to Rainy lake. Then the British commissioner offered to surrender his claim to the St. Louis river route, if Mr. Porter would accept a boundary along the course of the Grand Portage, the line to commence thus where the village of Grand Portage now is, about ten miles southwest of the mouth of Pigeon bay. This suggests that Mr. Barclay was seeking to preserve to the British the posts of the Northwestern Fur Company, which would stand on American soil if the center of the Pigeon bay and river was made the boundary.

There was no difference finally between the commissioners, except as to that strip of land between the Pigeon river and the old existing portage route called the "Grand Portage" at that point, an insignificant area. But they could not agree, and they reported their disagreement as to this matter and others to their respective governments. They agreed as to the line west of Rainy lake.

After the report of the commissioners nothing was done for a period of about fifteen years, and the differences were not settled until 1842, when matters were compromised in what is known as the Webster-Ashburton treaty. By that treaty the Pigeon river boundary was settled on, although a right was reserved to the British to use the portages on the American side of the river.

It is a singular fact that the president of the United States, in submitting the Webster-Ashburton treaty to the senate, said that the region between the Pigeon river and the St. Louis river was considered valuable as a mineral region, showing that even in that early day, long before any mineral wealth

was discovered north of Lake Superior, its existence was suspected.

The map by John Mitchell, dated in 1755, forming Plate IX at the beginning of this paper, which makes frequent references to it, was evidently compiled to a great extent from hearsay; but it was used as supposedly the best map then available, for the country north and west of Lake Superior, by the plenipotentiaries who framed the treaty of Paris in 1783 between the United States and Great Britain. It has three radical errors which had an important effect on the settlement of the boundary.

It erroneously indicates that the main thread of the St. Lawrence river system extends up to the Lake of the Woods, and that the waters of the Lake of the Woods flow into Lake Superior. Therefore the treaty makers fixed the boundary at Pigeon river on the theory that the river was the main extension of the St. Lawrence system of waters. The fact is that the Pigeon river extends only about thirty miles from the lake. At that point rises the height of land, and all waters west of it go to the Hudson bay. Had the diplomats not been misled by this map, and had they known the truth, they would have used the St. Louis as the boundary and Duluth would be in Canada.

There is no such lake as the Long lake shown on the map. At the mouth of the Pigeon river there is a bay six or eight miles in length. The delineation and name given by Mitchell were undoubtedly derived from the "Lac Long" on the map drawn by the Assiniboine chief, Ochagach, with others, for Verendrye in 1728, which map aided for a map by Buache, the French geographer, in 1754.

Mitchell's map shows Isle Phelipeaux, but there never was any such island. The nearest land southeast of Isle Royale is the Keweenaw peninsula. Possibly the map maker had heard that the point of the peninsula was cut off from the main land by streams, lakes and marshes, used as a canoe route with portages, in the course of the present canal, so that he intended to show that point as an island.

The fanciful nature of the map is also shown by the Apostle

islands. Mitchell made exactly twelve of them, in order to conform with scripture. There are in fact a larger number of islands in the group.

The map does not show Minnesota Point nor the Duluth harbor. Manifestly it was carelessly made from hearsay, and other maps in existence at the time were overlooked or ignored. This was, however, the official British map. Its errors gave rise to much controversy.

John Mitchell was a botanist and an author of numerous works in the natural and physical sciences and in history. He was born in England, and had his university education there; came over to America about 1700, and lived in Virginia forty-seven years, writing and publishing botanical works; and returned in 1747 or 1748 to England, where in 1755 he published this map of the British colonies in North America. The next year another edition of his map was published in Paris, and a second English edition appeared in 1757, which was reprinted in 1782. There are copies of all these maps in the British Museum Library.

David Thompson, who had charge of the surveys of the St. Louis and Vermilion route, and of the Pigeon river route, which latter was accepted as the international boundary, was born in Westminster, now a part of London, England, in 1770; and died near Montreal, Canada, in 1857. He was in the service of the Hudson Bay Company eight years, 1789-1797, and of the Northwest Fur Company the next eighteen years. He was the earliest professional surveyor and geographer in Minnesota, coming in 1798 from the Red river valley to Red lake, and thence to Turtle lake on the most northern tributary of the Mississippi river, mapping these lakes and streams for their insertion on a large manuscript map of Canada which he prepared for the Northwest Company.

#### REFERENCES TO SOURCES CONSULTED FOR THIS PAPER.

History and Digest of the International Arbitrations to which the United States has been a Party, by Prof. John Bassett Moore, 53d Congress, Second Session, House of Representatives, Miscellaneous Documents, No. 212, in six volumes, 1898; Vol. I, Chapter VI, "Boundary from Lake Huron to the most Northwestern Point of the Lake of



the Woods: Commission under Article VII of the Treaty of Ghent," pp. 171-195, with the part of Mitchell's map northwest of Lake Superior at page 180; Vol. VI, Maps under Articles VI and VII of the Treaty of Ghent.

Numbers 36 to 39 in this series of maps present the survey of the west end of Lake Superior, the harbor of Duluth and Superior, and the proposed boundary by way of the St. Louis and Embarrass rivers to Vermilion lake; and numbers 40 to 55 are plats of the survey on the route accepted as the international boundary, from Pigeon bay and river to the Lake of the Woods.

Six topographic sheets are added, numbered 56 to 61, which show the land relief or contour of Isle Royale, the contiguous northwest shore of Lake Superior, and the routes surveyed along the Pigeon and Arrow rivers and onward to the east end of Namekan lake, near Rainy lake.

The History of Minnesota, by Rev. Edward D. Neill, fourth edition, 1882, with several maps; especially Appendix A, "Early Charts of Lake Superior and Upper Mississippi," pp. 797-802, containing Ochagach's map at page 800.

The Geology of Minnesota, Final Report, in six volumes, 1884-1901; Vol. I, Chapter I, "Historical Sketch of Explorations and Surveys in Minnesota," by Prof. N. H. Winchell, pp. 1-110, with maps, including the map of Ochagach on page 19.

The Aborigines of Minnesota, by Prof. N. H. Winchell, 1911; Chapter II, "Aboriginal Geography of Minnesota—Old Maps," pp. 24-62.

Travels and Adventures in Canada and the Indian Territories, between the Years 1760 and 1776, by Alexander Henry, published in 1809, pp. 236-246.

Voyages from Montreal . . . in the Years 1789 and 1793, by Alexander Mackenzie, published in 1801; first part, "A General History of the Fur Trade from Canada to the Northwest," pages i-cxxxii, with a map.

Narrative of an Expedition to the Source of St. Peter's River, Lake Winnepeek, Lake of the Woods, etc., performed in the Year 1823, . . . under the Command of Stephen H. Long, compiled by Prof. William H. Keating, in two volumes, Philadelphia, 1824, and London, 1825, with a map.

Report intended to illustrate a Map of the Hydrographical Basin of the Upper Mississippi River, by J. N. Nicollet, 1843, 170 pages, with a large and most admirable map.

Minnesota in Three Centuries, 1655-1908, four volumes, published in 1908; Vol. I, by Warren Upham, pp. 267-278, 287-9, and 295-313, quoting much from the works of Henry and Mackenzie, before cited.

Minnesota Historical Society Collections, Vol. VII, The Mississippi River, and its Source, by Hon. J. V. Brower, 1893, 360 pages; Appendix, "How the Mississippi River and the Lake of the Woods became instrumental in the Establishment of the Northwestern Boundary of the United States," by Alfred J. Hill, pp. 305-352.

M. H. S. Collections, Vol. VIII, 1898; "The International Boundary between Lake Superior and the Lake of the Woods," by Dr. Ulysses Sherman Grant, pp. 1-10, with a map; "Minnesota's Northern Boundary," by Prof. Alexander N. Winchell, pp. 185-212; "Route of the Fur Trade along the Northern Boundary of Minnesota," by Captain Russell Blakeley, pp. 362-372, containing extracts from Henry and Mackenzie.

The Public Statutes at Large of the United States of America, Vol. VIII, 1848, "Treaties between the United States of America and Foreign Nations, from the Declaration of Independence of the United States to 1845, with Notes," edited by Richard Peters, 617 pages.

Public Treaties of the United States, in force on the first day of December, 1873, edited and published under the direction of the Secretary of State, 1875, 902 pages.







**RETURN TO → CIRCULATION DEPARTMENT**  
**202 Main Library**

LOAN PERIOD 1 <b>HOME USE</b>	2	3
4	5	6

**ALL BOOKS MAY BE RECALLED AFTER 7 DAYS**

1-month books may be renewed 3 times  
1-year books may be renewed 2 times  
Renewals are subject to availability

**DUE AS STAMPED BELOW**

Information Desk

<del>REC. CIR.</del> OCT 16 1985	OCT 24 1992	
SEP 20 1987	AUTO DISC CIRC	APR 22 '93
AUTO. DISC	AUTO DISC CIRC DEC 18 '92	RECEIVED
OCT 22 1991	LIBRARY USE ONLY	APR 29 1996
	MAR 23 1993	CIRCULATION DEPT.
LIBRARY USE ONLY	CIRCULATION DEPT.	
MAR 29 1998	AUTO DISC CIRC MAR 23 '99	APR 28 2006
CIRCULATION DEPT.		JUN 18 2007
	LIBRARY USE ONLY	
MAR 21 1998	APR 22 1993	
	CIRCULATION DEPT.	

RETURN TO the circulation desk of any  
University of California Library

or to the

NORTHERN REGIONAL LIBRARY FACILITY  
Bldg. 400, Richmond Field Station  
University of California  
Richmond, CA 94804-4698

ALL BOOKS MAY BE RECALLED AFTER 7 DAYS

- 2-month loans may be renewed by calling  
(510)642-6753
- 1-year loans may be recharged by bringing  
books to NRLF
- Renewals and recharges may be made  
4 days prior to due date

DUE AS STAMPED BELOW

**JAN 16 2004**

**APR 05 2007**

**APR 08 2007**

**JUN 18 2007**

DD20 15M 4-02

